WATER FOOTPRINT

The water footprint (WF) is defined as an indicator of fresh water consumption. For a specific product, it is defined as the volume of water consumed directly and indirectly in the manufacturing process.

Cetaqua carries out research projects associated with water footprint analysis, applied to the urban water cycle and industry, and contributes to including this indicator in company management.

The water footprint in the complete water cycle

The ‘Water Footprint’ project was introduced to meet the objective of promoting efficient water use in all water cycle processes, which resulted in the Waterlily tool. Cetaqua worked with CIRSEE and SAFEGE to determine a methodology and a tool for implementing water footprint calculations in the different phases of the water cycle.

The Waterlily tool calculates the water footprint for the complete water cycle in terms of the concept of life cycle analysis and using ISO 14046 methodology. It is a modular tool that allows the water footprint to be broken down and calculated in different phases of the urban water cycle (drinking water treatment, distribution network, sewerage network and wastewater treatment), and also calculates the aggregate water footprint for the entire cycle. The methodology also provides information on the impacts of these processes on human health, the depletion of resources and the quality of ecosystems.

Water footprint in the food and drink sector

Cetaqua has conducted studies in various sectors, notably that of food and drinks. Below, two projects in this sector are described that were carried out using water footprint methodology, promoted by the Water Footprint Network.

A project carried out for a brewery demonstrated that over 96% of the water footprint of beer is due to raw materials. Therefore, the important role that agriculture plays in this indicator is clear. Hence, good management of water consumption in crops is essential, involving efficient irrigation systems and thorough control of the water needs of plants at any given moment to optimise the use of the water resource. However, the contribution of other activities throughout the supply chain should not be overlooked when it comes to adequate management and decision making regarding water.
In addition, the ‘Carbon footprint and water footprint calculation for pork products and promoting their reduction’ project was developed in the livestock sector, with the aim of helping Catalan industrial pork producers to reduce the impact on climate change of their main pork products and to improve efficiency in the use of resources (water and energy), by developing indicators that permit improvements in sustainability and competitiveness. One result of the project was the added value generated for meat products, with the potential of launching them in international markets, where environmental legislation is sometimes restrictive. The results from the project show that the largest proportion of the water footprint is due to fodder production, contributing 94% of the total, due to rain and irrigation water used in agriculture. The study helped identify actions for water footprint reduction in the sector, with the biggest opportunities for reduction lying in the source of raw agricultural material, a possible criterion for selecting suppliers in fodder manufacture. Finally, a further result of the study was a general tool for calculating the water and carbon footprints in the pork industry.