

Water and agriculture

Water is a global issue in which agriculture plays a pivotal role. Agriculture already uses more than 70% of the world's total water consumption, while the population growth, leading to a need for more agricultural production, is likely to increase this figure even further. Two main action topics are now emerging on the relationship between water and agriculture: better resource management and the preservation and control of water quality.

Though France, and more generally Europe, is not under water stress, agricultural actors are already implementing intelligent water management solutions. Climatic events (such as drought peaks) can cause **targeted and temporary strains** on water resources. At the same time, such changes are imposed by societal and ethical debates on access to water.

To this end, a **set of "intelligent" techniques** related to precision agriculture are being implemented. For example, sprinklers or drip irrigation systems connected to a set of field sensors (weather, soil moisture, root profile, etc.) or satellite and predictive measurement tools, can support controlled irrigation that meets the specific crop needs by adapting to climate conditions.

The other major issue in the agricultural world concerns **water quality**. Beyond upstream actions to limit the use of fertilizers and plant protection products, quality control of agricultural inputs could become a central issue. Consumers are increasingly vigilant about food quality and the absence of pollutants, with debates on endocrine disrupters becoming increasingly important.

However, farmers who use mainly surface water, groundwater and recycled water are now dependent on the control measures put in place by public authorities. Farmers could therefore ask for more precise control tools to be put in place, similar to those existing, in particular for the control of industrial or drinking water. The installation of connected sensors could also allow them to access measurement data and play a role in the complex chain of agricultural water quality control.

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