

# Research & Innovation

## SmartFertiReuse

*A smart fertirrigation solution with treated urban wastewaters using a decision support tool*

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<https://www.smartfertireuse.fr/>



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Reuse water



### 1 - Introduction

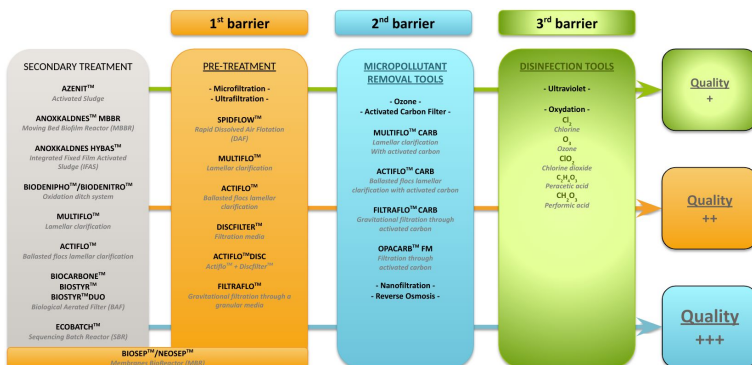
Veolia has been doing reuse for many years, and mainly outside France, for:

- **domestic** purposes: the capital of Namibia, Windhoek, have been supplied with 30% of drinking water produced from its wastewater for 50 years
- **industrial** purposes: in Sydney, Veolia designed a wastewater treatment system that allows at least 80% of the effluent to be reused for irrigation of a dairy farm.

Veolia is also used to work with farmers in France to put in place solution of irrigation or fertirrigation from urban or industrial treated waste water.

### 3 - Water quality fitted for the reuse purpose

Multi-barriers solutions are available from Veolia for polishing, micropollutants removal and disinfection.



Treatment barriers used to reach required water quality



maize in Aureilhan



### 2 - Regulatory framework

Last year, France released a water plan with the ambitious objective of saving 10% of water in the country by 2030 through water reuse.

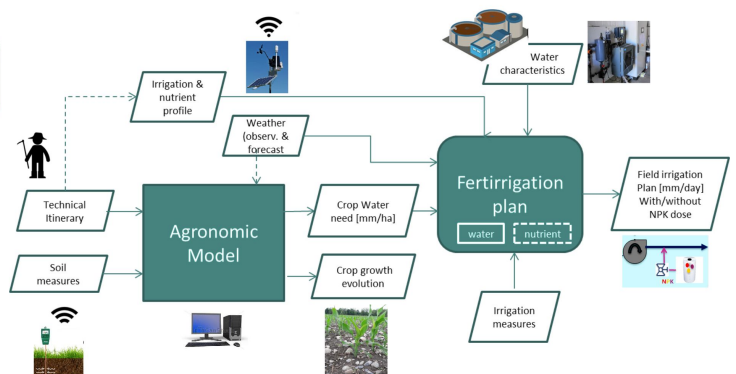
Today, the reference regulatory text in France is the two new orders, published on December 21 and 28 2023, in application of the decree of August 29, 2023, adapted from (EU) 2020/741 relating to the use of urban wastewater for watering or irrigating **crops, green spaces or forests**.

### 4 - The SmartFertiReuse research project

The SmartFertiReuse project aims to develop an **innovative service** to support the agricultural world and local authorities in the recovery of treated wastewater and optimal management of fertilizers.

During the project, we demonstrated that after two successive years of irrigation, no negative impact could be found on the quality of soil, crops or groundwater.

A digital decision tool was developed in order to use less water and chemical fertilizers for similar yields. The SmartFertiReuse represent an attractive solution to **irrigate with treated wastewater**, even in times of drought, in an intelligent and safe way for plants, health and the environment.



Components of the tool at the heart of the fertirrigation service using treated wastewater