



**WATOP**

PROJECT Nº: LIFE11 ENV/ES/000503

**CHRONOGRAM**

	Duration	2012			2013				2014				2015			
		II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	N
A.1	Expected	■	■													
	Current	■	■													
B.1	Expected		■		■											
	Current		■	■	■											
B.2	Expected			■	■			■								
	Current			■	■	■	■	■	■							
B.3	Expected							■	■	■						
	Current							■	■	■						
C.1	Expected	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Current	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
D	Expected	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Current	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
E.1	Expected	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Current	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
E.2	Expected	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Current	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Summarizing, current situation of WATOP Project (to date 31<sup>st</sup> July 2014), is the following:

**Action A1: TECHNICAL REQUIREMENTS FOR IN SITU IMPLEMENTATION OF THE PURIFICATION EQUIPMENT (COMPLETED WITH SUCCESS)**

The targeted objectives have been achieved:

They have been studied the different processes, facilities and lay out of the Waste Water Treatment Plant (WWTP) of Estella, managed by SMSA, in order to establish the specific technical requirements of the new filtering device to be developed. At the same time, it has been carried out a study of the wastewater parameters at the filtering inlet and outlet conditions, to define the system in terms of these parameters. Finally, the electrical consumption and flow rates of the WWTP of Estella have been studied with the aim of acquiring more knowledge of the current plant.



WWTP of Estella

**Action B.1: DEVELOPMENT OF THE PURIFICATION DEVICE AT PILOT SCALE. (COMPLETED WITH SUCCESS)**

The targeted objectives have been achieved:

Different nano-resins PAA/CD have been synthesized at pilot scale, which capacity to capture organic micro-pollutants. The obtained nano-resins have different crosslinking degree and are able to work at different pH.



Nano-resin PAA/CD





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On the other side, a prototype of the filtering device has been designed and developed, basically a casing which contains different removable plates, where the nano-resins or filtering material will be placed. The system is able to modify the number of modules in order to optimize the quantity of nano-resin to be added.



*Laboratory scale prototype filter*

**Action B.2: PILOT SCALE TESTS OF THE PURIFICATION CAPACITY OF PPCPs REMOVAL AND PARAMETERS ADJUSTMENT (COMPLETED WITH SUCCESS)**

Although this task was initially planned to be finished in December 2013, it has been elongated until June 2014.

We have studied the behavior of the filter material with static device and the purification capacity of nanoresina. It also has conducted tests filtration with water contaminated with drugs such as acetaminophen, carbamazepine and ibuprofen, with the device continuously and its cleansing and regenerative capacity, thus demonstrating its effectiveness in tests.



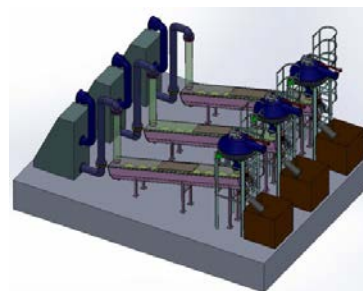
*Laboratory testing*

In turn was tested regeneration capacity of these resins for reuse once the saturation point is reached

**Action B.3: PROTOTYPE IMPLEMENTATION IN WATER PURIFICATION PLANT (ON GOING)**

This task has been carried out the following developments:

It has carried out the design of demonstrative pilot in the months to carry out the manufacture and development of the same plant. It has 3 filters in parallel to achieve the results desired water purification.



*Demonstrative filter*

Regarding the following tasks, they are being carried out from the beginning of the project and will be done during all the project:

- Action C.1: MONITORING OF THE PROJECT IMPACT
- Action D: COMMUNICATION AND DISSEMINATION ACTIONS
- Action E.1: PROJECT MANAGEMENT
- Action E.2: NETWORKING WITH OTHER PROJECTS.

