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PROJECT DETAILS

Coordinator:
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Total cost:
EUR 1 484 986

EU contribution:
EUR 742 493

Start Date
2012-08-01

End date
2015-07-31

Call for proposal:
CIP-EIP-Eco-Innovation-2011

Funding scheme:
CIP-EIP-EI-PMRP - CIP-Eco-Innovation - Pilot and market replication projects

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ECO/11/304317

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Regenerable high efficiency filtering media for arsenic treatment in drinking water

REGENERA is a production and regeneration system of a **high performance regenerable filtering media** for **purification** of drinking water from **arsenic** and other pollutants in water treatment plants

Co-funded by the Eco-innovation Initiative of the European Union

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ABOUT THE PROJECT

The project includes three innovative and interconnected items:

- A **highly-efficient production plant** characterized by a low environmental impact to produce an iron oxide-hydroxide based filtering media to remove arsenic from drinking water.
- A **high yield regeneration plant** characterized by a low environmental impact to regenerate oxide-hydroxides of iron saturated with arsenic.
- A **quick prediction tool** to evaluate at laboratory level the field performance of filters.

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REGENERA FOCUSES ON THE DEVELOPMENT OF A NEW INDUSTRIAL SCALE PROCESS TO REMOVE ARSENIC FROM WATER

THE GOAL

The **main benefits** arising from REGENERA relate to two distinctive aspects of the produced **filtering media**:

1. **High adsorption performance** (the material can adsorb up to twice the amount of arsenic with respect to other products on the market). Given the water to be treated, this reduces the amount of filtering media to be used.

2. R**egenerability**, that means:
   a) a dramatic **reduction in the amount of waste produced** (about 97% less waste, compared with conventional systems that dispose the spent material to landfill);
   b) less demand for **new filtering media** (owing to reuse of regenerated material);
   c) **saving of reagents** (about 14 tons of ferric chloride and approximately 70.000 liters of **water** saved each time an average filter is run with regenerated material instead of new filtering media).