

Evaluation and management of arsenic contamination in agricultural soil and water - AgriAs

Sustainability assessment for arsenic removal technologies

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Public Summary

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The aim of this study (Task 3.3) was to conduct a sustainability assessment for some of the conventional technologies to remove arsenic from a water source. This sustainability assessment was based on multi-criteria approach having criteria concerning technological, economic, environmental and societal issues. In order to conduct a wide-ranging assessment 22 criteria were selected in total. The technologies chosen for this assessment were adsorption, coagulation-filtration, ion exchange and membrane technology. Sustainability assessment showed that the adsorption and coagulation-filtration processes are competitive options for the treatment of surface waters having significant arsenic concentration. If very high water quality is of importance then reverse osmosis systems are feasible options as well. The arsenic removal technology must be chosen case by case considering especially characteristics of water and design parameters since there is not universal technological solution suitable for all possible situations.



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