

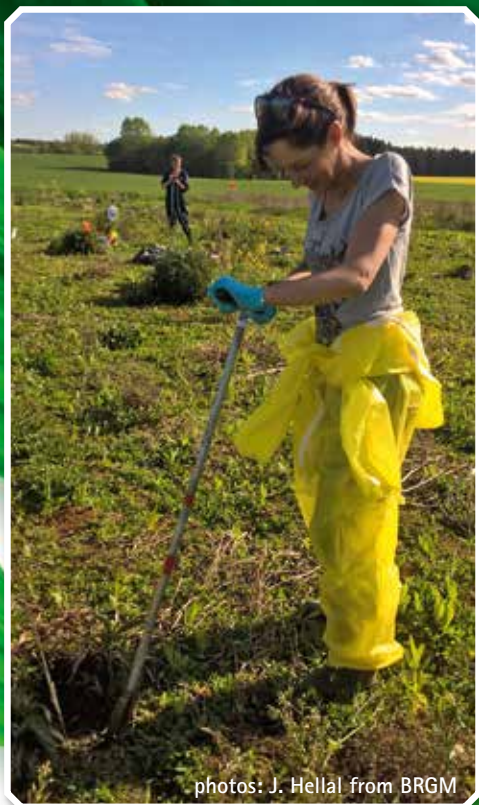
Evaluation and Management of Arsenic Contamination in Agricultural Soil and Water



AgriAs project

1.4.2017 – 31.3.2019

<http://projects.gtk.fi/AgriAs>

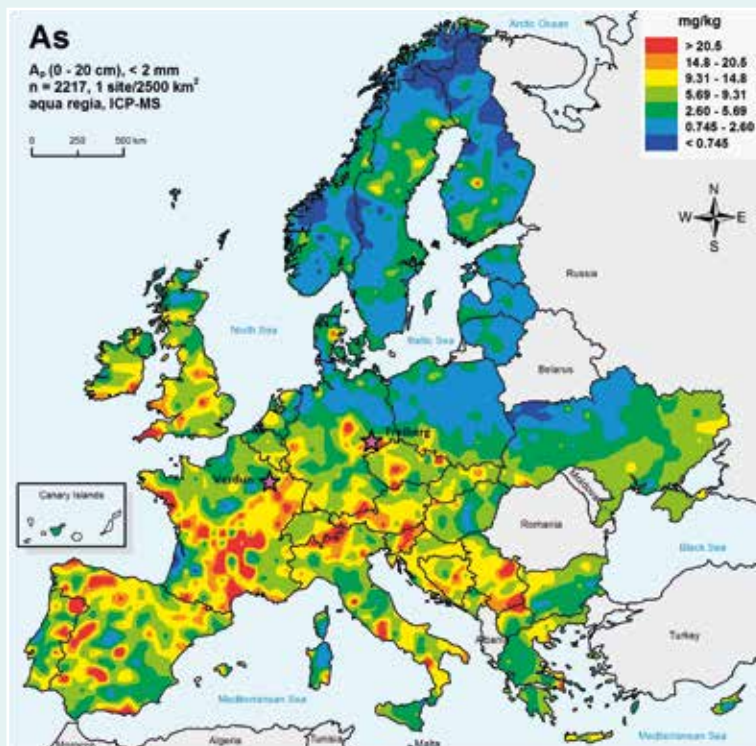


photos: J. Hellal from BRGM

The AgriAs project is financed under the ERA-NET Cofund WaterWorks 2015



AgriAs evaluates risks of arsenic exposure through agriculture, summarizes methods for arsenic remediation, and provides tools for ecotoxicity and bioavailability assessment.



Verdun and Freiberg are the study sites of the AgriAs project. Research organizations and companies from Finland, Germany, France, Sweden and Netherlands participate in the AgriAs project. Colour scale: Spatial distribution of arsenic in European agricultural topsoil (0 – 20 cm), Aqua regia extraction on the <2 mm size fraction, source: GEMAS Data Set. Reimann, C., Birke, M., Demetriades, A., Filzmoser, P. & O'Connor, P. (eds.) 2014. Geochemistry of Europe's Agricultural Soils. Part B. Geol.Jb. B 103.

AgriAs project will

- Address water and soil pollution by arsenic,
- Summarize national and European databases to assess the scale of arsenic contamination in European agricultural soils and waters,
- Develop recommendations/guidelines for sustainable management of arsenic risks together with stakeholders,
- Demonstrate arsenic removal technologies in Verdun and Freiberg to assess their technological and economic feasibility,
- Apply biological tools to manage ecological, environmental and human risks,
- Disseminate the results of the project.

Test sites

Verdun, France

A former chemical ammunition treatment facility converted into agricultural land

One of the most important historical areas of chemical ammunition destruction of World War I, containing arsenical chemical warfare agents, located in a sensitive zone for agriculture and groundwater.



photo: D. Hubé from BRGM



photo: F. Battaglia, BRGM

Freiberg, Saxony, Germany

Centre of mining industry

The area in Freiberg is characterized by widespread arsenic contamination due to the geochemistry of bedrock and soil in Ore Mountains (Erzgebirge) and mining and ore processing activities to produce silver, lead and zinc for over eight centuries. According to the Saxon State Office for Environment, Agriculture & Geology, arsenic contents are high in agricultural land containing up to several hundred mg/kg of arsenic in soil.



photo: H. Forberg from LfULG



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Please find the AgriAs project in the Water JPI web-pages:
<http://www.waterjpi.eu/>
http://www.waterjpi.eu/images/Kick-Off/Presentation_2016/



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