

Improving soil remediation in Flanders, Belgium

Case Study 8



Enforce



Improving soil remediation in Flanders, Belgium

Case Study 8



Location

Flanders, Belgium.



Local Context

This case study focuses on assessing the bioavailability of per- and polyfluorinated chemicals (PFAS) and heavy metals (cadmium, nickel) in private gardens within the **Province of Antwerp**, especially near heavy industries. Citizens will participate by planting specific test plants in their gardens and monitoring soil conditions to evaluate pollutant transfer to plant tissues.



The Challenge

- High PFAS persistence and accumulation, links to severe health effects
- No legal binding norms for maximum PFAS levels in food/feed in Belgium
- No uniform binding restrictions for PFAS in the EU
- Regulatory discrepancy between PFAS industrial discharge limits and drinking water standards
- Insufficient scientific data on emerging PFAS variants, ineffective risk assessment and preventive regulation

Planned Actions

01

Citizens will plant a variety of crops and greens in their gardens, along with placing soil moisture and temperature sensors.

02

At harvest, samples from the plants and soil will be collected to analyse pollutant concentrations and understand the soil-plant-pollutant transfer dynamics.

03

This initiative aims to establish a citizen-based methodology for tracking soil contamination and developing a public database on soil-plant pollutant transfer factors.



Key Conducted Activities

- Ongoing phytoremediation (using plants to remove harmful substances) trials in collaboration with local farmers in Sint-Gillis-Waas - Zwijndrecht (Antwerp) which is affected by PFAS contamination
- Industrial hemp seeds are sown and now growing
- PFAS measurements in soil and plant tissues
- Citizen engagement activities in other cities in Belgium to explain phytoremediation and soil clean-up practices



Expected Impacts

The project will yield valuable insights into soil-plant interactions concerning pollutant bioavailability and management practices, contributing to the development of **regulatory thresholds and guidelines for soil remediation.**



Enforce

Partners Involved



Join our community!
join-enforce.eu



LinkedIn
ENFORCE

Project Coordination:
info@join-enforce.eu

Dr. Svetlana Klessova
Project Coordinator
G.A.C. Group France



Youtube
ENFORCE_EU

Prof. Chrysi Laspidou
Scientific Coordinator
University of Thessaly

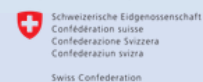


Funded by
the European Union



UK Research
and Innovation

Project funded by



Federal Department of Economic Affairs,
Education and Research EAER
State Secretariat for Education,
Research and Innovation SERI

This project has received funding from the European Union's Horizon Europe programme under grant agreement 101134447— ENFORCE. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them. Co-funded by UK Research and Innovation (UKRI) under the UK government's Horizon Europe funding Guarantee. This work has received funding from the Swiss State Secretariat for Education, Research and Innovation (SERI).