



Flanders
State of
the Art

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PFAS, ein neue Herausforderung
Symposium 12 Nov 2019 Solothurn, CH

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PFAS, a challenge for soil policy

How is this done in Flanders sofar?



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2. **Setting soil standards for PFAS**
3. **An integrated approach - biomonitoring**
4. **International collaboration: creating a network**
EmConSoil



1 A measuring campaign: results and actions



Emerging contaminants: a phased approach

Key: organizing **exploratory measuring campaigns** for relevant substances:

limited size, randomly distributed

aim: global risk assessment for Flanders
improvement of procedures to avoid and
remove risks



A **phased approach**, by substance or by group of substances

For **prioritization**, taking into account:

expected risks (toxicity, mobility, persistence, ...)

expected extent of the problem (# cases)

→ risk activities



OVAM-database



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Measuring campaigns

- Dioxines (2011)
advisory system for safe local food production
- TBA (tributylalcohol) (2013)
additive of gasoline
no further action needed
- 1,4-dioxane (2015)
stabilizer of chlorinated solvents
to be analyzed on sites where 1,1,1-TCA was used
- PFAS (2016)

PFAS measuring campaign

24 sites were selected using OVAM-database and other information



- risk activities:
- fire fighting training grounds
 - fire incidents
 - textile industry
 - paper industry
 - water treatment plant
 - waste dump

Soil and groundwater were analyzed for 21 PFASs

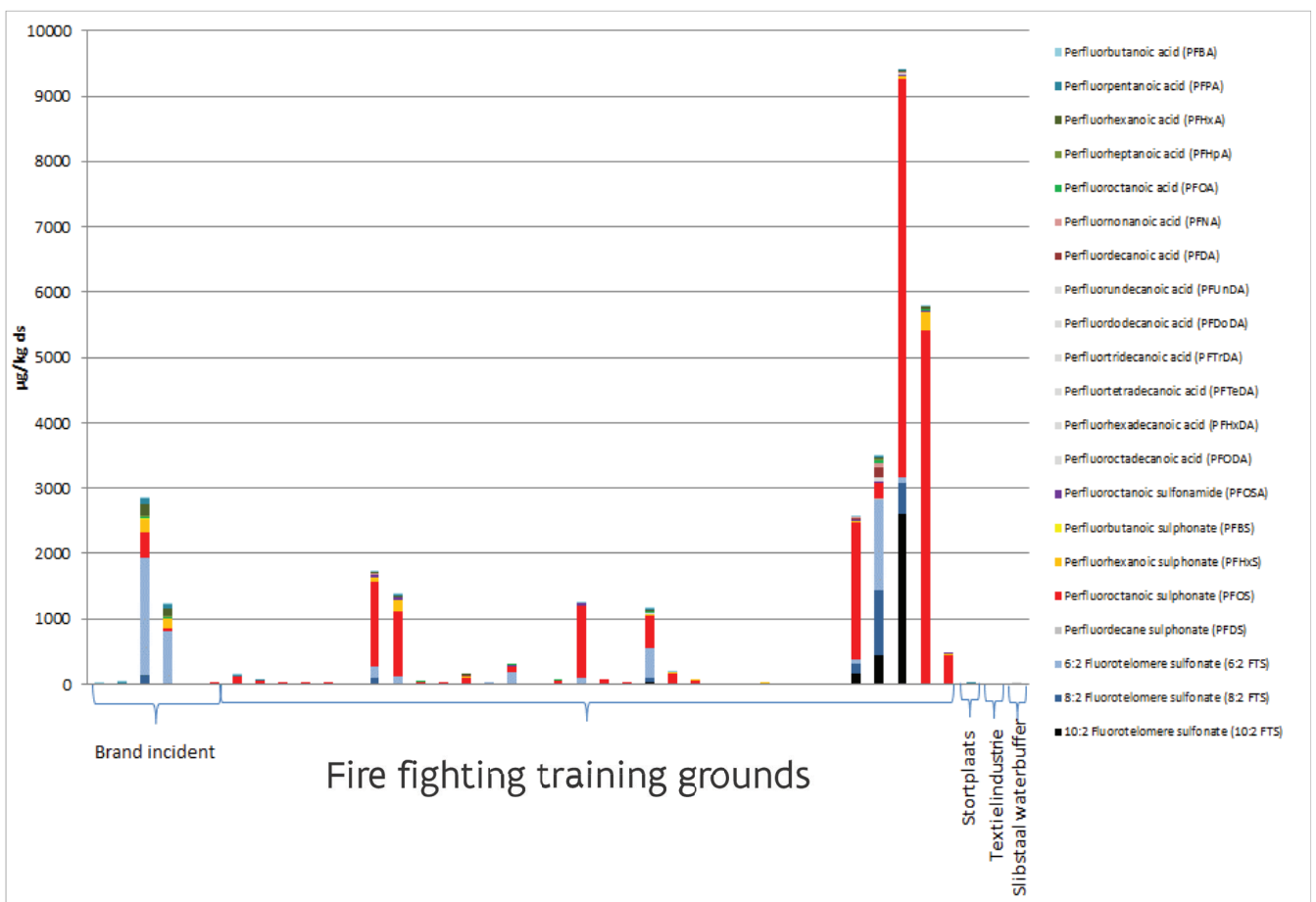


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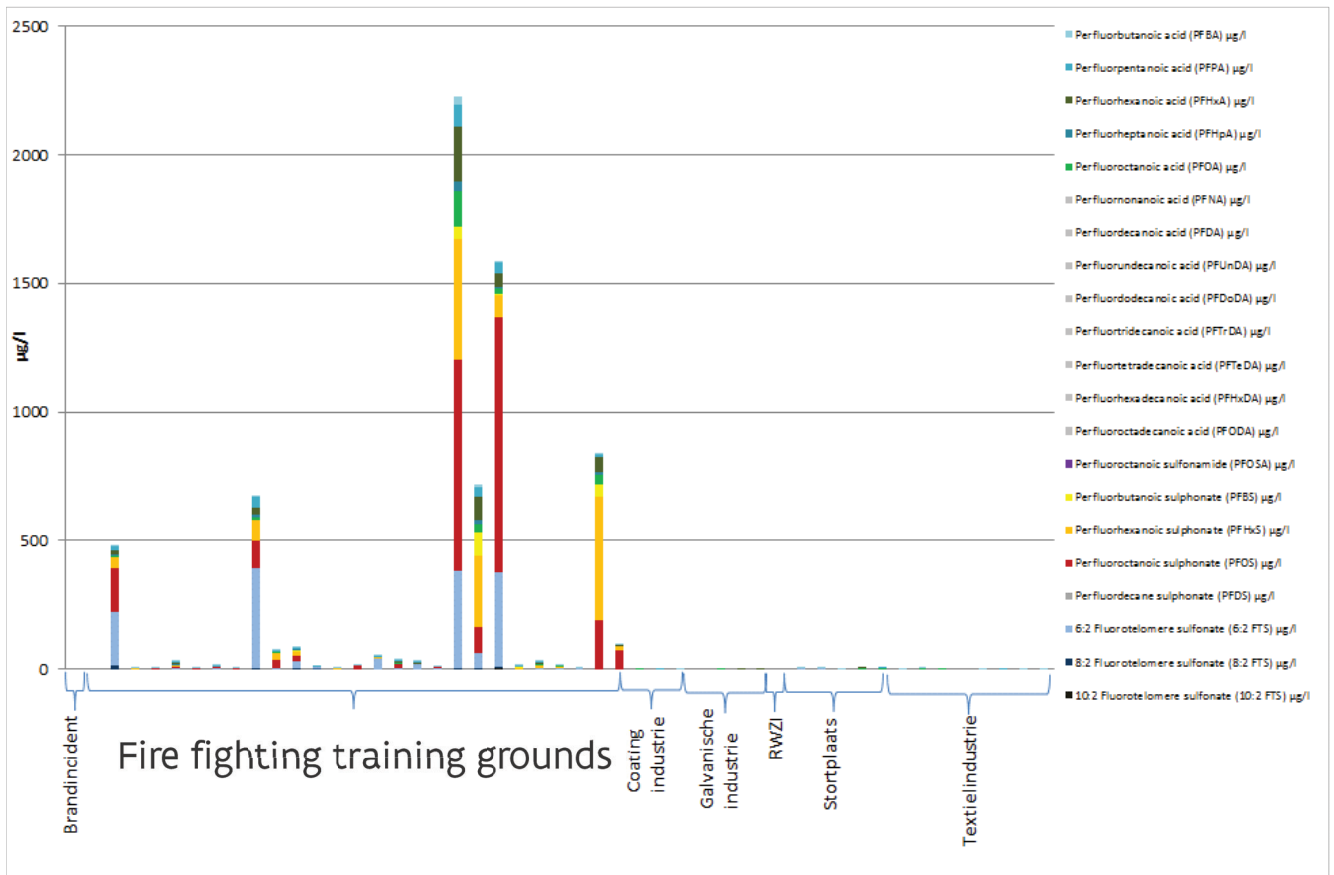
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Results soil (in $\mu\text{g}/\text{kg ds}$)



Results groundwater (in $\mu\text{g/L}$)



Implementation of PFAS

Especially on **fire fighting training grounds** we found soil & groundwater contamination with PFAS

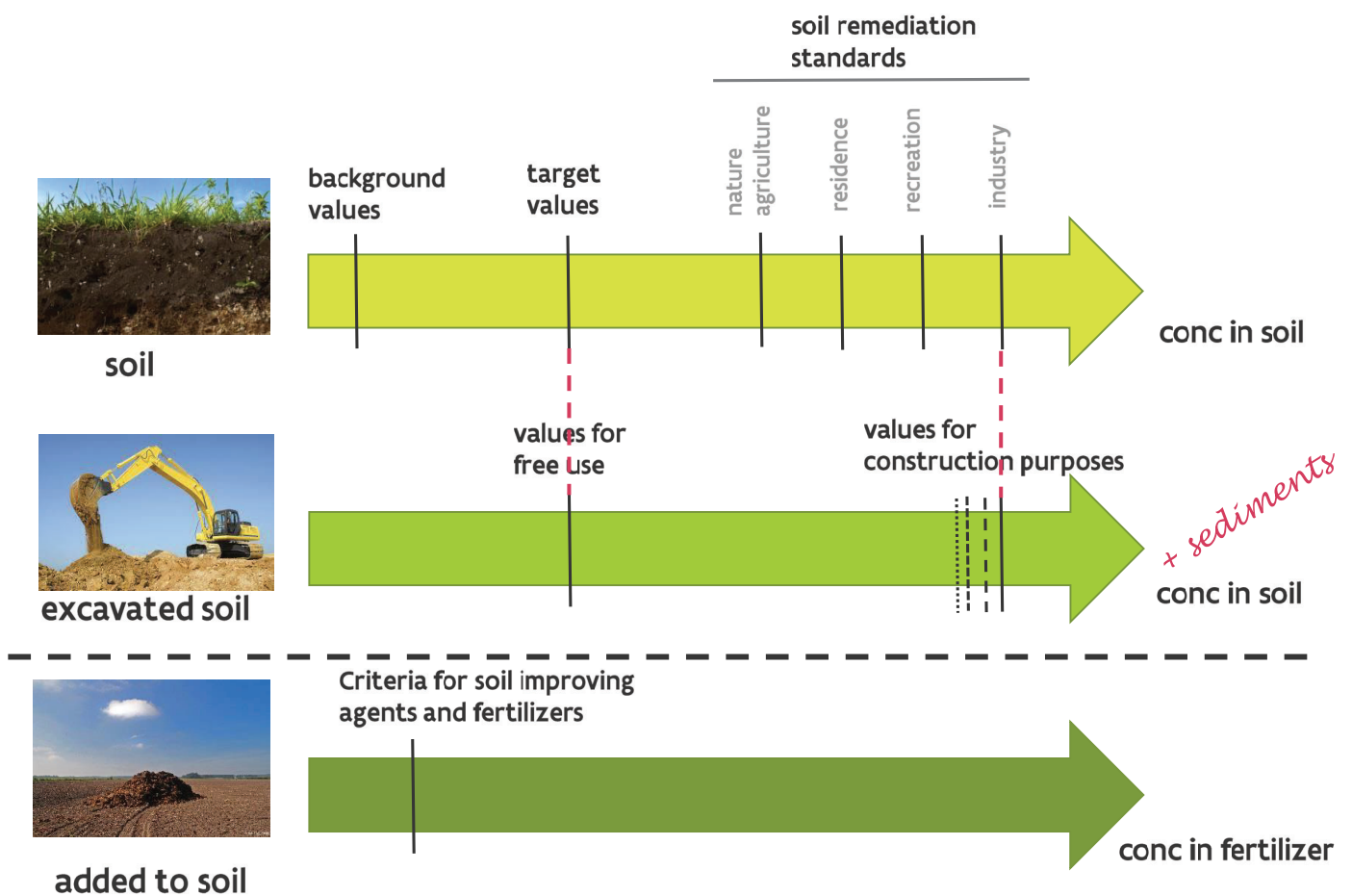


Further actions:

- **Additional measurements** on two sites:
elevated conc in soil up to 40 - 100m from source
- **Guidelines** are in developed : for fire brigades
for soil experts on excavated soil
- **Soil remediation criteria:** under development
- **Liability:** Are the fire brigades responsible? Is this fair?
Is new soil legislation needed for emerging contaminants & diffuse pollution?

2 Setting soil standards for PFAS

Overview of soil thresholds used in Flanders



Development of soil criteria for PFAS

General rule: for parameters without standards in regulations:
criteria are proposed by accredited soil experts

For excavated soils: (most urgent)

provisional criteria : for free use of excavated soil : **8 µg PFOS / kg ds**
for construction purposes: **70 µg PFOS / kg ds**



Soil remediation criteria: to be derived by the end of 2019
for PFOS and PFOA



Background values: project planned for 2020

⇒ In collaboration with The Netherlands

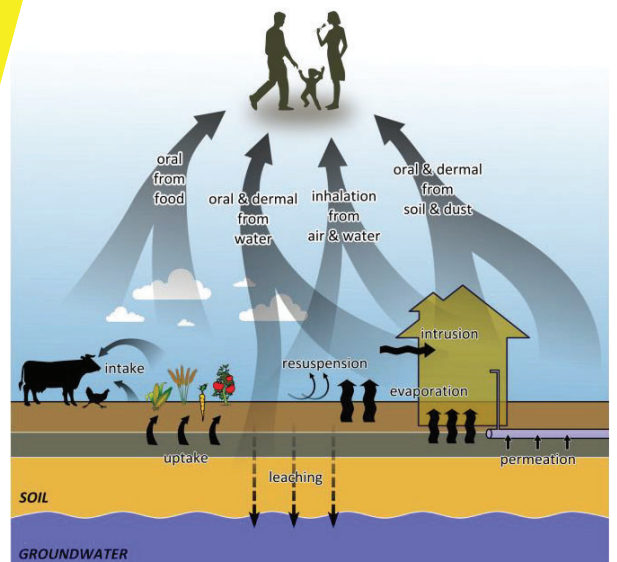
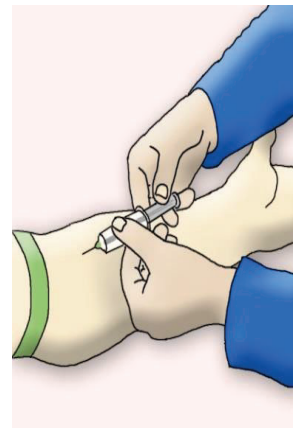


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3 An integrated approach - biomonitoring



PFAS plan for Flanders

How are people **exposed** to PFAS? Main exposure routes?
e.g. (local) food, water, house dust, soil, ...
combined with biomonitoring data

Research project to start in 2020
in collaboration with the Department for the Environment
(Environment & Health)

Coordination of all actions related to PFAS:
monitoring surface/groundwater/drinking water quality
licensing policy
materials & waste



HBM4EU : <https://www.hbm4eu.eu/>

HBM4EU science and policy for a healthy future

COORDINATING AND ADVANCING HUMAN BIOMONITORING IN EUROPE TO PROVIDE EVIDENCE FOR CHEMICAL POLICY MAKING

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THE PROJECT

STAKEHOLDERS

PRIORITISATION STRATEGY

HBM4EU PRIORITY SUBSTANCES

RESULTS

TRAINING

CONTACTS

SURVEYS

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EVENTS

FUNDING OPPORTUNITIES

4 International collaboration: creating a network EmConSoil



White paper EmConSoil

Challenges of em con in soils are described

Focus: on **legacy** of emerging soil contaminants

Stakeholders from industry, research, policy, consultancy & civil society

Aims of the network:

- exchange and dissemination of knowledge, data, technical & juridical experience
- developing strategies and policies through co-creation
- raising awareness among stakeholders
- enabling international and intersectoral collaboration

Next meeting: **ENSOR II 18 – 19 May 2020** - Mechelen, Belgium



Please, join the network

Go to:

www.ovamenglish.be/emconsoil

Contact: emconsoil@ovam.be



Home > EmConSoil

EmConSoil

Challenges for Emerging Soil Contaminant governance & policy Creating a multi-stakeholder network

Many harmful chemicals find their way into the environment, and end up in soils, groundwater and sediments. They are considered as contaminants of emerging concern because they are a threat to human health and ecosystems.

Dealing with the legacy of soil contamination with emerging contaminants poses major challenges for policy makers, scientists, consultancies and problem owners. Adequate governance and management strategies are needed to prevent risks and further spreading of these contaminants and to preserve healthy soils for the future.

It is clear that the problem cannot be solved by the regulatory authorities alone. Concerted actions and initiatives are urgently needed. Therefore, OVAM wants to initiate an international multi-stakeholder network: EmConSoil, 'Challenges for emerging soil contaminant governance & policy'.

This initiative is a follow-up to our first international workshop on 'Emerging policy challenges on New SOil'

Do you want to participate?

Please fill out the [registration form](#). Participation is free of charge, and without obligation.

Publications

[White paper Emconsoil CHALLENGES FOR EMERGING SOIL CONTAMINANT](#)



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Thank you for your attention

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