



CAPTURE

Development of a
robust analytical
protocol for PFAS
contamination in soil
and groundwater by
the LIFE Capture
project

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Today's presentation

- LIFE Capture
- Problem statement
- Objective
- Method
- Further steps

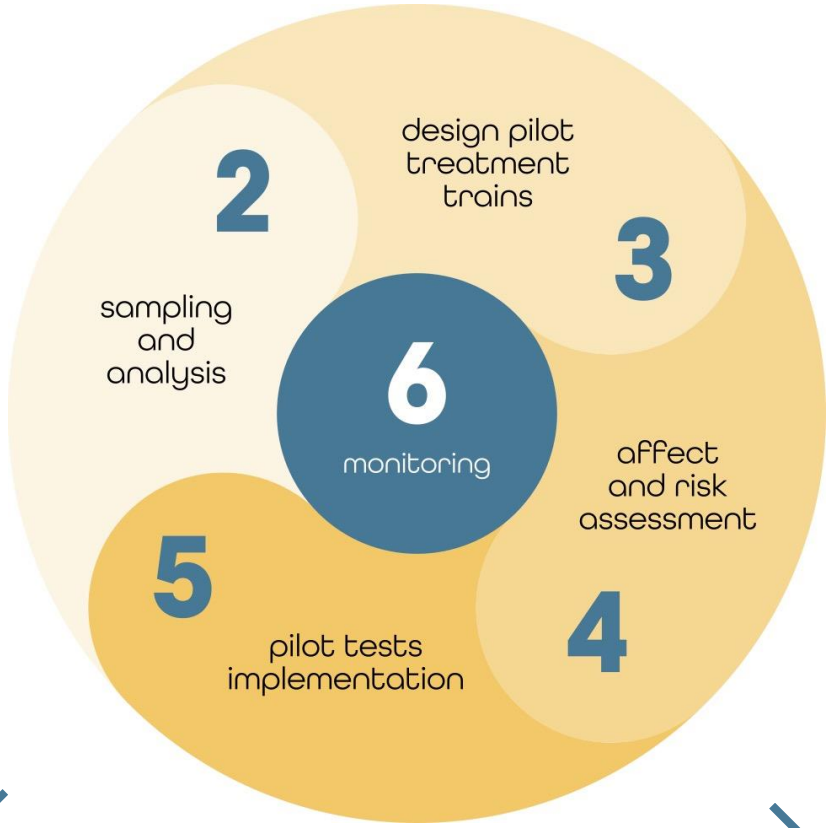
LIFE Capture

- Combining novel Analytical protocols for PFAS contamination with Technologies for sustainable Remediation
- Duration: 2022-10-01 – 2027-09-30



1

project management



sustainability, replication and exploitation

7

LIFE Capture: expected results and impacts

- 4 sites will be (partially) remediated during projects
- Other replication sites in the following years



Problem statement

Identification → Assessment → Management
of PFAS contamination in ground and groundwater

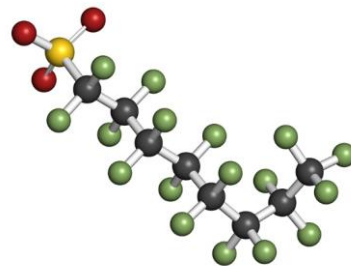
- Inadequate **Identification**

- Target analysis

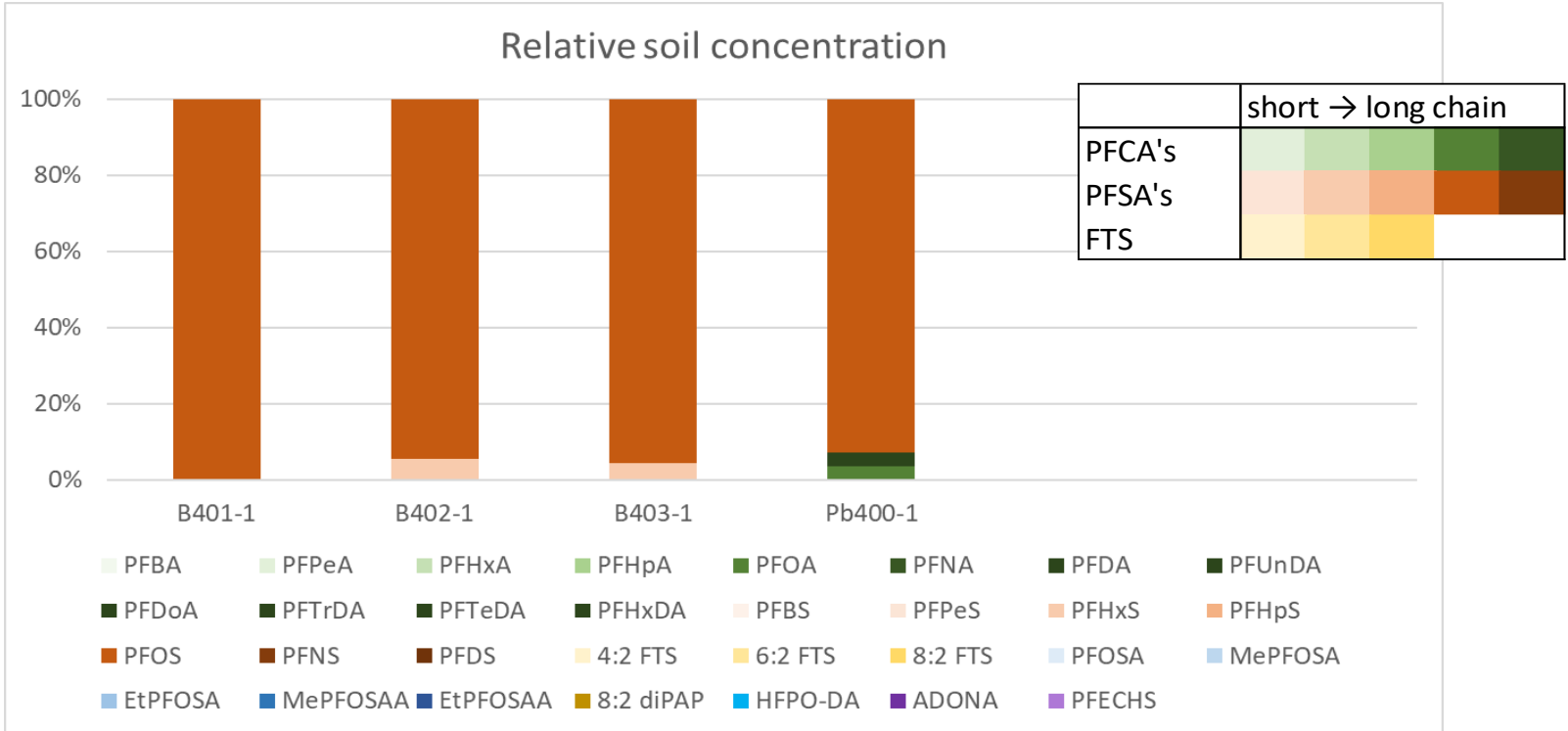
- False negative results

- Lack of adequate analysis protocols

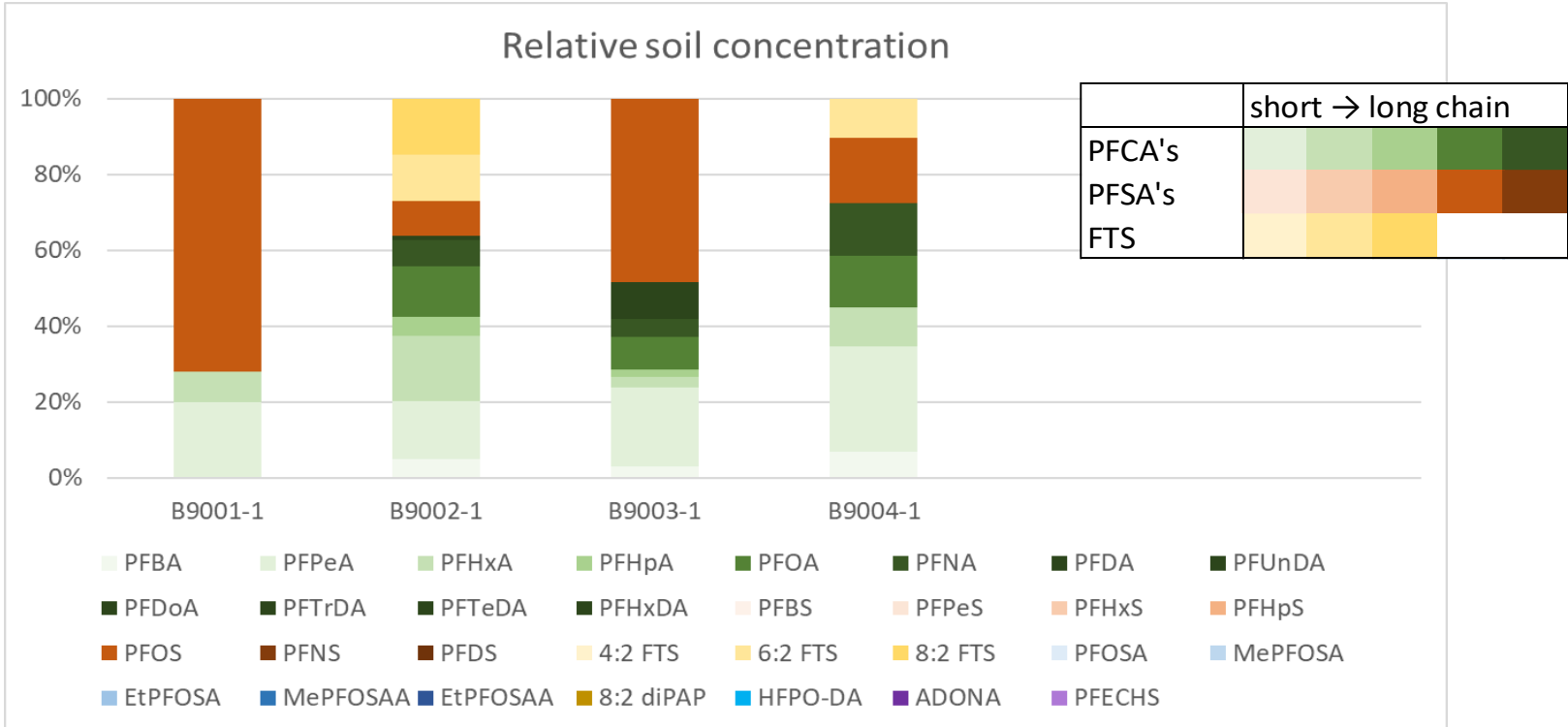
- Total PFAS



Case: 1993 foam intervention - soil

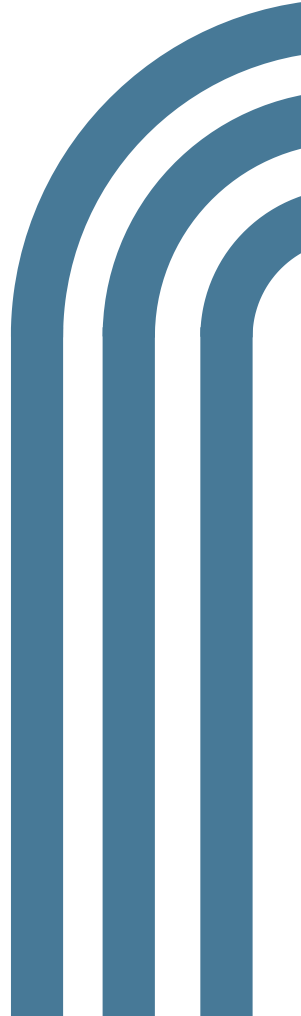


Case: 2013 foam intervention - soil

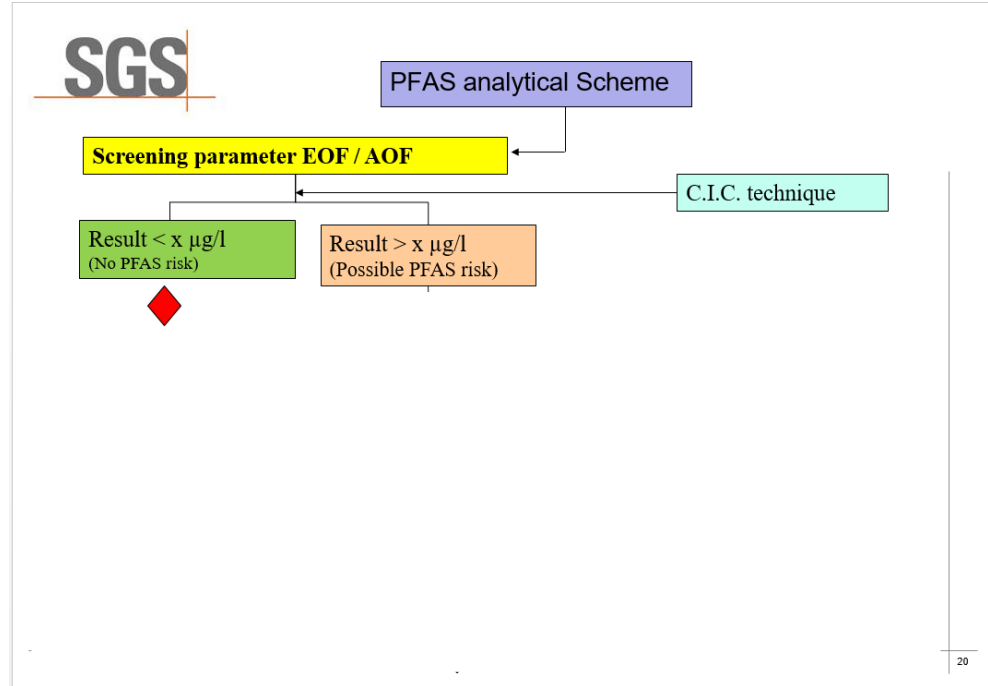


Objective

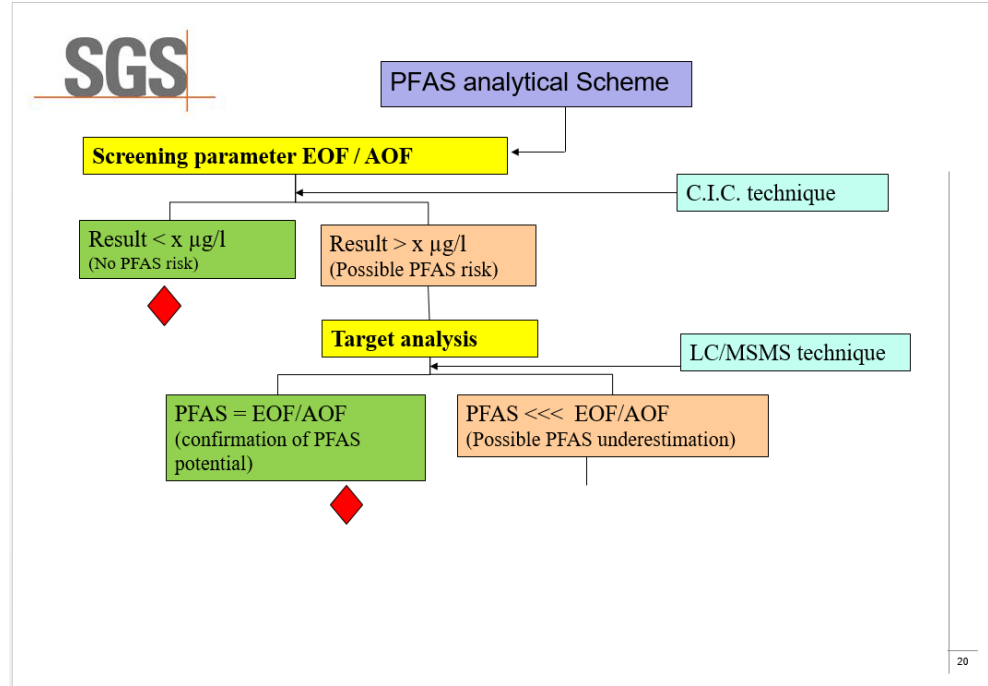
- Development of **quantification protocol** for total PFAS contamination



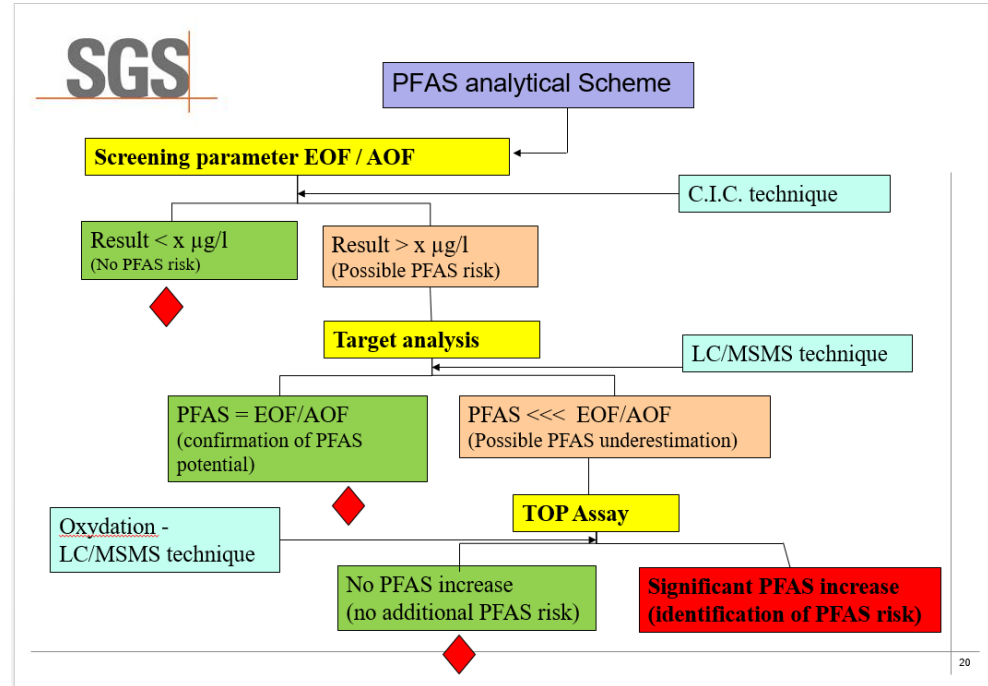
Method : 3 steps



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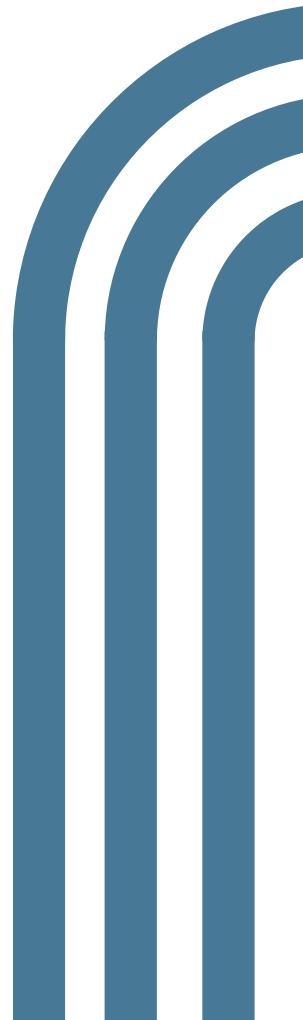
Method: first results

- Sampling suspected sites
 - PFAS using target analysis
 - => 90% of cases: increase in []



Method: first results

- Sampling suspected sites
 - PFAS using target analysis
 - => 90% of cases: increase in []
- High increases => typical for « recent » pollutions
- Low increases => typical for « historical » pollutions
- Could also depend on the applied target list



Method: impact

- Reduction of false negatives
- Potential reduction of number of analysis
 - Saves time
 - Saves money



Further steps

- In water: AOF: 2 $\mu\text{g}/\text{l}$
- In soil: EOF: 200 $\mu\text{g}/\text{kg}$ => 40 $\mu\text{g}/\text{kg}$



Further steps

- In water: AOF: 2 µg/l
- In soil: EOF: 200µg/kg => 40µg/kg
- Top Assay in soil
 - Work in progress
 - Extract PFAS from soil
 - With water
 - With organic solvent (methanol)





CAPTURE

Thank you

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