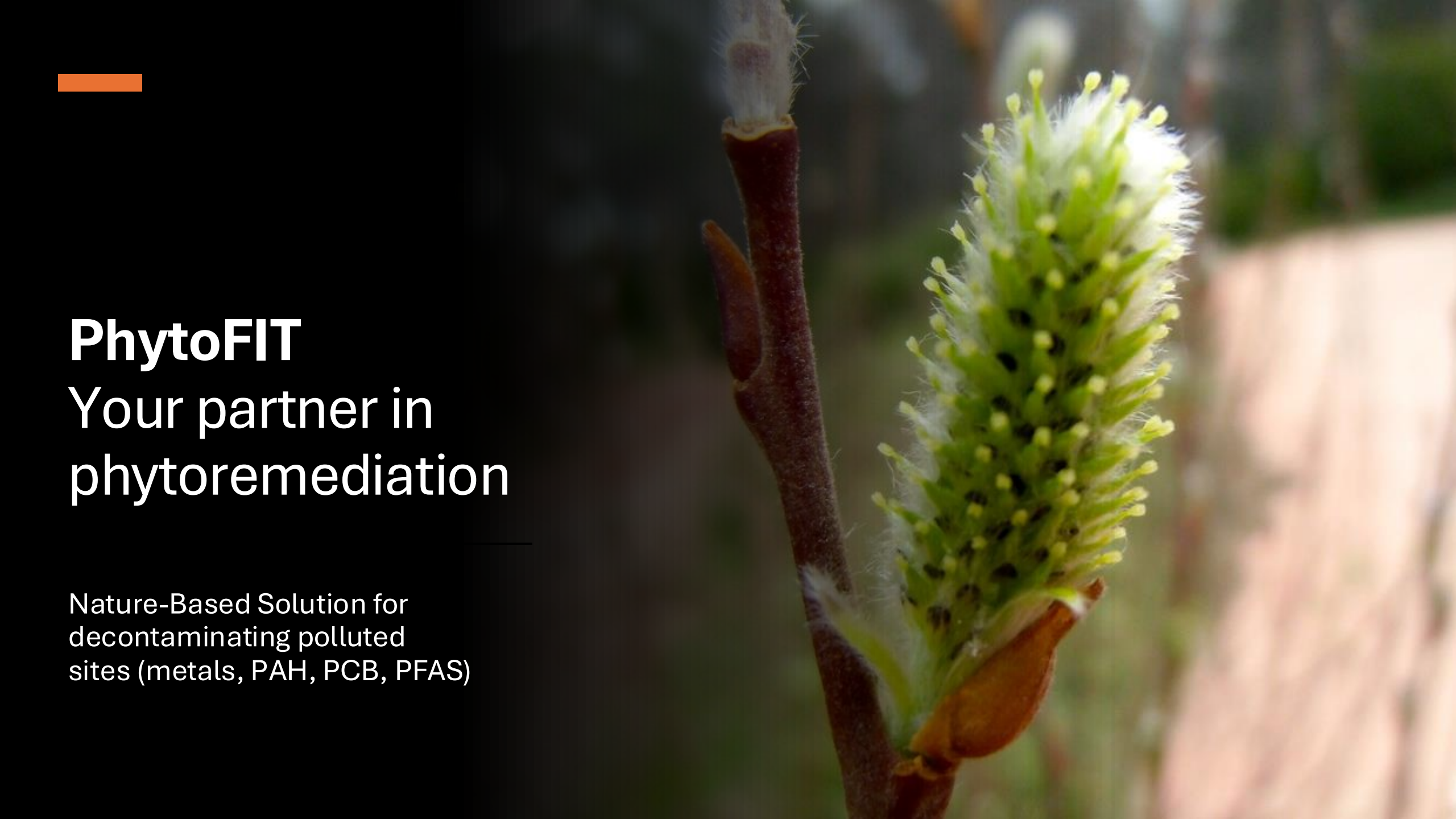
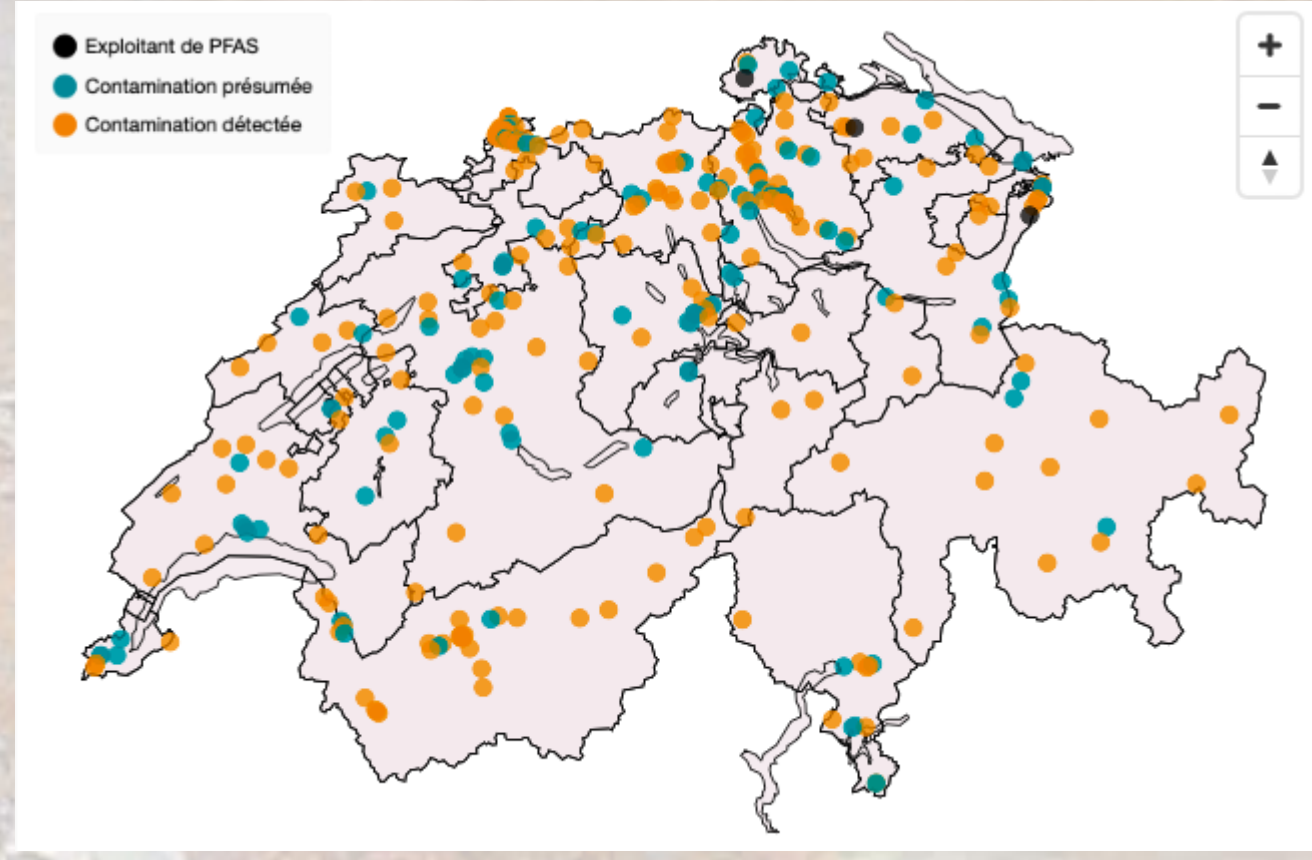
PhytoFIT
Your partner in phytoremediation

Nature-Based Solution for decontaminating polluted sites (metals, PAH, PCB, PFAS)



Context: Soil and water pollution is widespread in Switzerland, Europe and Globally

- The total number of Swiss sites listed as “polluted” and requiring remediation by 2045 is 4,000. Thousands of other sites are not listed.
- The main pollutants are heavy/trace metals, organic pollutants (PFAS, PAHs, PCBs, furans, and dioxins). The types and levels of contamination vary across sites.
- Contamination often leads authoritities to suspend the utilisation of the soil/water resources.
- When implemented, remediation techniques mainly consist of excavating contaminated material/soil for landfill or incineration. This may result in a net loss of soil and its ecological functions, as well as high energy and economic costs.



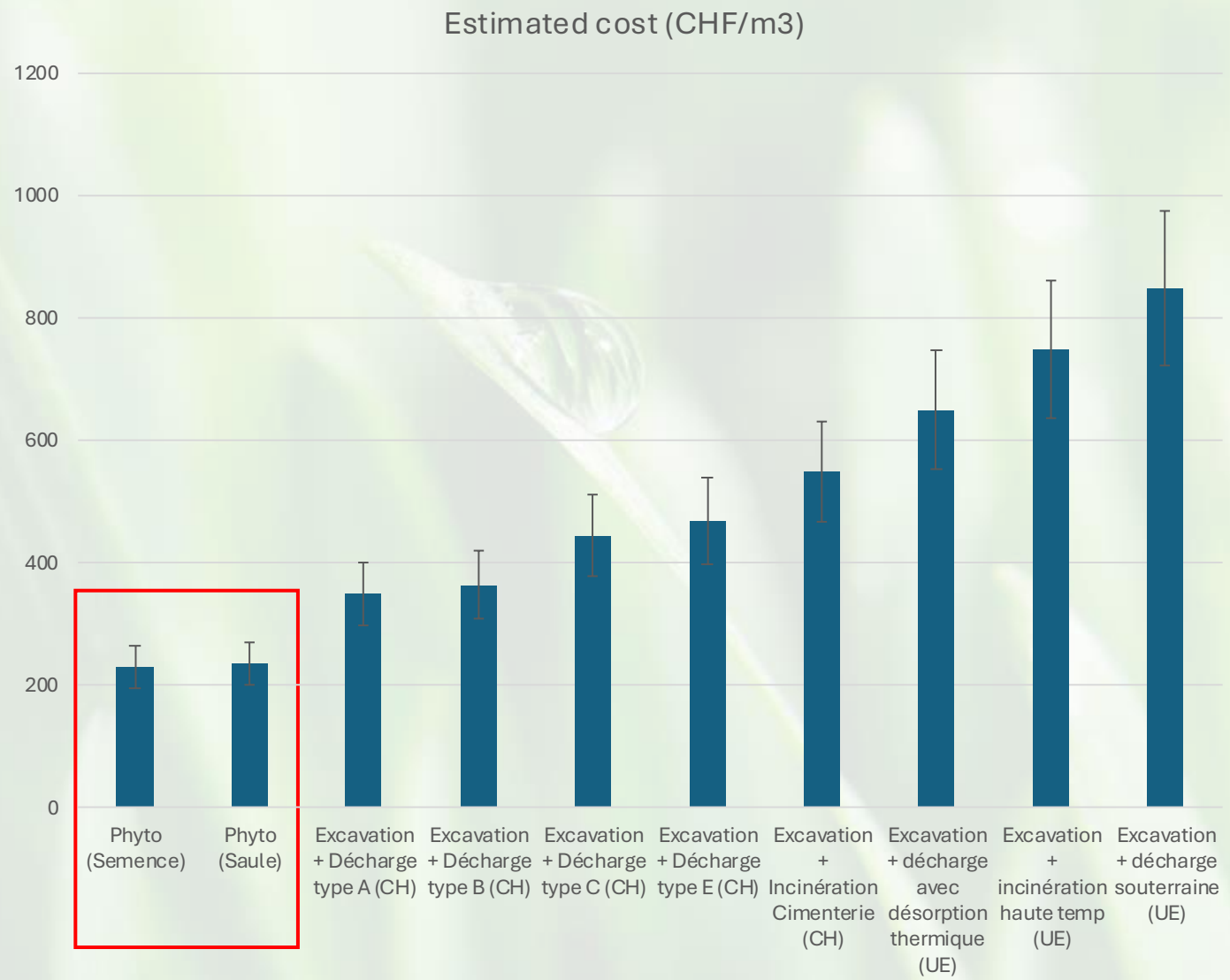
Map of PFAS-contaminated sites in Switzerland (Source: Forever Pollution Project)

Our solution: cleaning up soils/waters with plants (phytoremediation)

- Several plant species (e.g. willow, fern, hemp, euphorbiaceae) enable **phytoaccumulation** (exceptional properties for extracting and accumulating pollutants) and/or the **degradation of organic substances** (thanks to intense and specific rhizospheric activity).
- These plants have the ability to clean up soil or water contaminated with **metals, organic substances and/or PFAS** by degrading them in situ (phytoremediation) or accumulating them (phytoextraction).
- Phytoremediation is a **Nature-Based Solution (NBS)** for decontamination at a modest cost (compared to other methods) that is consistent with sustainable development.
- The exported biomass can be used as a **low carbon energy source** or sustainable material, as well as to generate **carbon credits**.

Treatments by phytoremediation bring about significant cost reductions

In situ phytoremediation could reduce costs by 50% to 400% per cubic metre treated, compared to remediation by excavation with landfill or incineration.



We support you through every step of your phytoremediation project

1. Initial Diagnosis (Sample and test)
2. Planting / Sowing (sapling or seeds)
3. Monitoring and maintenance of plants
4. Biomass harvesting
5. Biomass treatment and utilisation
6. Project Report and conclusions

Which types of project does phytoremediation apply to ?

- Legal remediation of contaminated sites
- Creation/restoration of agricultural areas
- Decontamination of roadsides and creation of buffer zones
- Decontamination of parks, playgrounds and gardens
- Cleaning and decontamination of former mining sites
- Decontamination of construction sites
- Vegetalisation of polluted industrial sites
- Prevention/protection against contamination risks

Our Team

Dr. Mario Fontana

Scientific Director

- PhD, Environmental Sciences
- Expertise:
  - Phytoremediation
  - Recycling industrial by-products into fertiliser
  - Soil pollution
  - Plant nutrition
  - Ecophysiology

Sébastien Haye

Executive Director

- MSc, Environmental Sciences
- Expertise:
  - Strategic Consulting
  - Sustainable biomass production and use
  - Project Management
  - Carbon Credits
  - Life Cycle Assessment

Anthony Devaux

Technical Director

- MSc, Geotechnical and geoenvironmental engineering
- Expertise:
  - Geology
  - Soil pollution
  - Construction pollutants
  - Project Management

Our team enjoys a Swiss and international network of partners (private and academic) specialising in soil property and pollutant analysis, plant physiology, landscaping and the remediation of contaminated sites and soils.

Contact

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