



# EU MISSIONS

## SOIL DEAL FOR EUROPE

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## Cluster on soil pollution and remediation

### WHY A SOIL POLLUTION AND REMEDIATION CLUSTER?

The **soil pollution and remediation cluster** brings together EU Mission Soil-funded projects and related initiatives working on the complex challenge of soil contamination and remediation. Pollution remains one of the most urgent and context-dependent threats to soil health. Its sources are varied, its impacts difficult to reverse, and its solutions highly specific to local conditions.

Against this backdrop, the cluster serves as a collaborative platform where projects can explore these challenges together. By connecting researchers and practitioners working on contamination monitoring, risk assessment, and remediation across Europe, the cluster helps align efforts, identify good practices, and support evidence-based policymaking.

A key driver of the cluster's work is the forthcoming **Soil Monitoring and Resilience Directive (SMRD)**, which aims to create a harmonised legal and technical framework for addressing soil pollution. As most Mission Soil projects were designed before the SMRD proposal was published, the cluster offers a space to bridge policy and research, allowing projects to understand emerging requirements and coordinate their contributions to its implementation.

### HOW DO WE WORK?

The cluster is co-led by **ARAGORN** and **EDAPHOS** (Cluster Advisers), supported by the **Mission Soil Platform**. It brings together **27 registered representatives from 22 Mission Soil projects** and may expand through collaboration with other EU-funded initiatives, networks, and standardisation bodies. Key institutional partners, i.e. the [Directorate-General for Agriculture and Rural Development \(DG AGRI\)](#) and the [European Research Executive Agency \(REA\)](#), provide input to guide discussions and ensure policy relevance. The [Joint Research Centre \(JRC\)](#) serves as a supporting collaborator on cluster outputs and supports cluster participants in contributing to key resources.

The cluster is designed as a flexible, project-driven structure with meetings and activities shaped by participants' needs and evolving policy landscapes. It operates through:

- **interactive workshops and thematic meetings** held online and in-person;
- **collaborative development of shared outputs** such as technical recommendations, guidance documents, and joint publications;
- **outreach activities** that connect the cluster with relevant networks (e.g. **NORMAN, CEN TC 444, PARC, TerraChem**) and ensure alignment with wider European and international efforts on soil contamination.

Cluster discussions aim to reflect the diversity of soil pollution contexts across Europe such as agricultural and industrial, diffuse and point-source, and legacy and emerging contaminants. Topics proposed for exploration include:

- prioritisation methodologies for contaminants;
- monitoring tools and sampling strategies;
- development of threshold values;
- risk assessment frameworks;
- evaluation of nature-based and technological remediation options;
- interactions between pollution and other soil health indicators.

The cluster was launched in June 2025, and discussions are already giving rise to tangible outputs that reflect the diversity of project experiences and contribute to shared goals. The following sections highlight an early activity emerging from the cluster: a joint publication on prioritisation methodologies, and future work for the cluster. This activity addresses both scientific and regulatory needs and aims to inform the implementation of the SMRD.

# JOINT PUBLICATION ON PRIORITISATION METHODOLOGIES

The planned article is a coordinated, cross-project scientific paper that synthesises real-world prioritisation exercises and methodologies to evaluate how different approaches perform across diverse European contexts. It will compare weight-of-evidence, multi-criteria and scoring based methods (and variants such as expert elicitation), and demonstrate their strengths and weaknesses through a series of harmonised case studies. Case studies will include PFAS, pesticides and metals, allowing the team to explore how prioritisation methods behave in data-rich versus data-poor situations.

In practical terms, the team will apply various prioritisation schemes to approximately 300 substances. The article will detail the data sources, assumptions and parameter choices that influence substance rankings, offering transparency and reproducibility. It will also address key implementation challenges relevant to monitoring programmes including sampling design and comparability, analytical costs and limits of quantification, how to treat data gaps and uncertainty, and the policy and socio-economic parameters that influence choices. Broader considerations such as mixture effects and alignment with adjacent regulations (water, food) will be discussed to ensure that the findings are applicable to risk assessment and management.

The multi-institutional author team will comprise of around 15 co-authors, representing a number of the Mission Soil projects and partner organisations. The article will be submitted for peer-reviewed publication, which will enable us to further refine the article by drawing on suggestions from the peer-review process following submission.



## FUTURE WORK

The cluster will work on the topics as defined in the Concept Note. For instance, it will support the refinement of the recent JRC technical report<sup>1</sup> on the harmonisation of soil pollution data and knowledge, fostering collaborative work among several projects on soil pollution (**ARAGORN, EDAPHOS, ISLANDR**) and the standardisation committee (**CEN/TC 444 WG**). The cluster will aim to provide input into future initiatives, such as the Soil Indicative List, which is expected to serve as a key tool under the Directive, guiding national monitoring systems and informing policy decisions on soil health and pollution.

<sup>1</sup> <https://data.europa.eu/doi/10.2760/4402833>



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