# CO-CREATING A SUSTAINABLE FUTURE FOR THE AYOLUENGO OILFIELD

## Practice Abstract #2

### BACKGROUND – PHYTOREMEDIATION AND STAKEHOLDER ENGAGEMENT

pHYBi develops phytoremediation strategies for polluted soils by combining species such as poplar, hemp, and Miscanthus with beneficial bacteria, mycorrhizal fungi, and soil amendments. A core pillar of the project is strong stakeholder engagement, ensuring that scientific methods are aligned with local knowledge, practical needs, and long-term land use.

By involving landowners, farmers, authorities and researchers throughout the process, pHYBi aims to increase acceptance, adapt interventions to site-specific conditions and support the continuous monitoring and refinement of restoration strategies.

This approach is being applied across four case studies, including the former Ayoluengo oilfield in Sargentes de la Lora, Spain. Decades of oil extraction activities, together with

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hydrocarbon contamination and paraffin residues, have left persistent pollutants in the soil This has reduced the area's fertility, biodiversity and economic opportunities. pHYBi's phytoremediation strategies, combined with active stakeholder participation, aim to address the technical challenge of soil restoration and the social challenge of defining sustainable future uses for the site.

## THE pHYBi PRACTICE – FIRST CO-CREATION WORKSHOP

In December 2025, the pHYBi project held its first co-creation workshop in Sargentes de la Lora. Focusing on the Ayoluengo oilfield use case, the workshop aimed to actively involve local and regional stakeholders in discussing practical and sustainable strategies for soil restoration, land management, and future land use. The event brought together 41 participants from 25 organisations, including farmers, landowners, researchers, companies, NGOs, and public authorities;



as well as other territorial actors.

The workshop used participatory methods, facilitated discussions, group work, scenario exercises, and visualisation tools to explore land management and restoration strategies.

A comprehensive stakeholder mapping conducted beforehand ensured that all relevant perspectives were included in theprocess. Participants examined phytoremediation approaches, considering both environmental restoration and circular economy applications. The iterative process allowed stakeholders to combine scientific knowledge with local experience, addressing ecological, economic, and cultural dimensions. Key challenges, such as governance complexity, funding constraints, territorial limitations, and community engagement, were openly discussed.

A more detailed description can be found in our website article:
https://www.phybi.eu/restoring-ayoluengo/

# RECOMMENDATIONS & KEY LEARNINGS

- Long-term engagement with stakeholders is essential to maintain trust, secure local ownership, and enable adaptive decision-making throughout the remediation process.
- Adopting an integrated territorial approach, combining phytoremediation with local value creation (e.g., biomass use, agriculture, and ecotourism), increases both environmental and socio-economic impact.
- Clear governance structures and coordination mechanisms should be established to manage administrative responsibilities, streamline permitting, and facilitate access to funding.
- Monitoring and evaluation of phytoremediation outcomes help adjust interventions in real time, ensuring that restoration strategies remain effective under changing environmental and land use conditions.

The workshop confirmed that co-creation and stakeholder engagement are crucial not only for the Ayoluengo site but for all pHYBi case studies applying phytoremediation. Engaging local actors early and continuously helps build trust, align expectations, and ensure that phytoremediation strategies are socially acceptable, technically feasible, and economically meaningful.

# About

pHYBi - Phytomanagement for a Bio-Based Textile Industry

pHYBi is an initiative funded by the Circular Bio-based Europe Joint Undertaking (CBE JU) that aims to combine the phytoremediation of polluted soils with the valorisation of lignocellulosic biomass to contribute to soil health and a bio-based circular textile industry.

## Key Facts

**4**
Years:
Okt. 2024 - Sept. 2028

**5**
Million €:
European Commission, Horizon Europe

**10**
Partners:
In Spain, Italy, France, Croatia, Germany

**4**
Case Studies:
In France, Spain and Coratia

## Project Partners

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