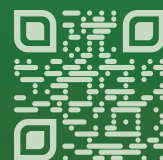


Background

The transition to a sustainable bioeconomy faces a critical challenge: sourcing feedstocks without competing for arable land needed for food production. This issue is particularly pressing in Europe, where around 80% of land is allocated to settlements, agricultural and forestry production, and infrastructure. The scarcity of land requires innovative approaches to feedstock cultivation. Degraded, polluted, and saline soils unsuitable for food crops offer a promising alternative for industrial crop cultivation.

Consortium and Contacts



Phytomanagement for a Bio-based textile industry

Project Scope

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:
from October 2024 –
September 2028



5

Million Euro:
European Commission,
Horizon Europe



10

Partners in:
Spain, Italy, France,
Croatia, Germany



4

Case Studies
in France, Spain and
Croatia

Coordinator Contact

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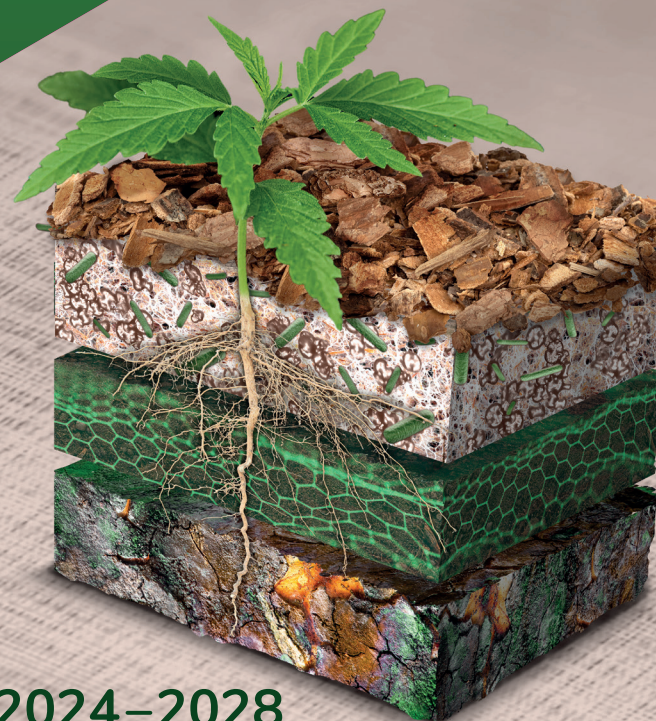
www.phybi.eu
@pHYBi Project
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Circular
Bio-based
Europe
Joint Undertaking



The project is supported by the Circular Bio-based Europe Joint Undertaking and its members. Co-funded by the European Union under grant agreement No 101156439.



2024–2028

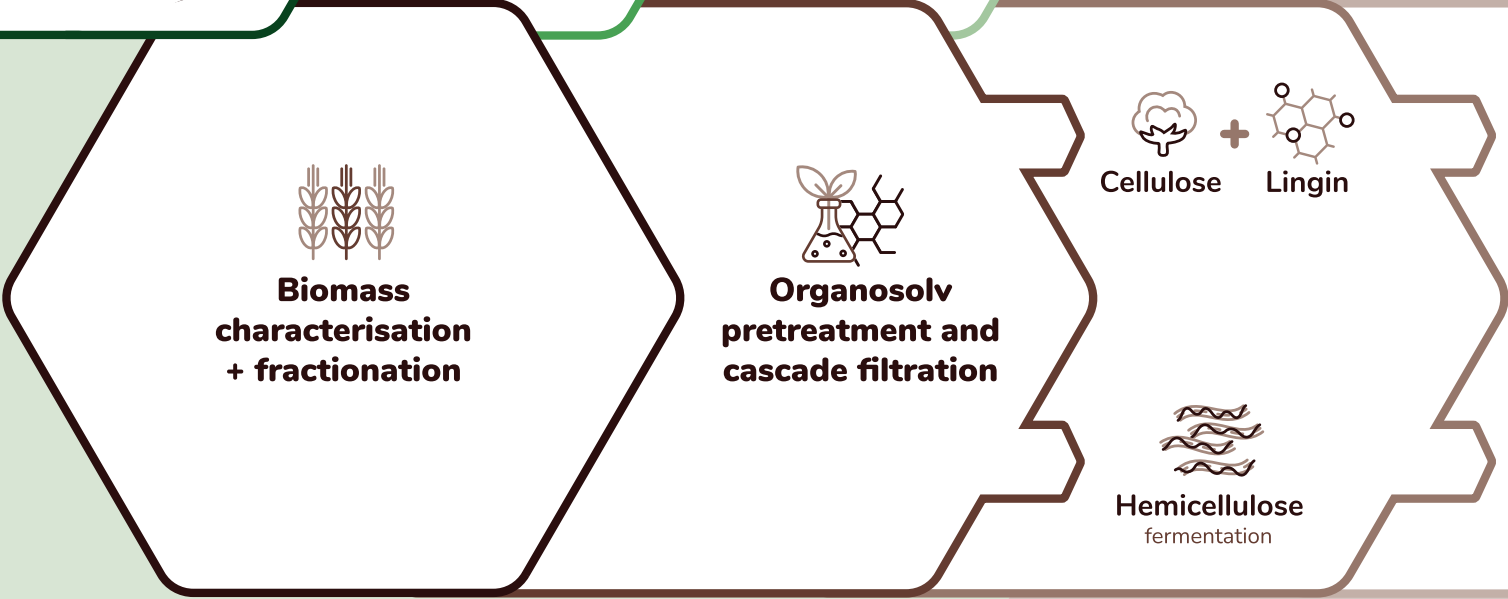
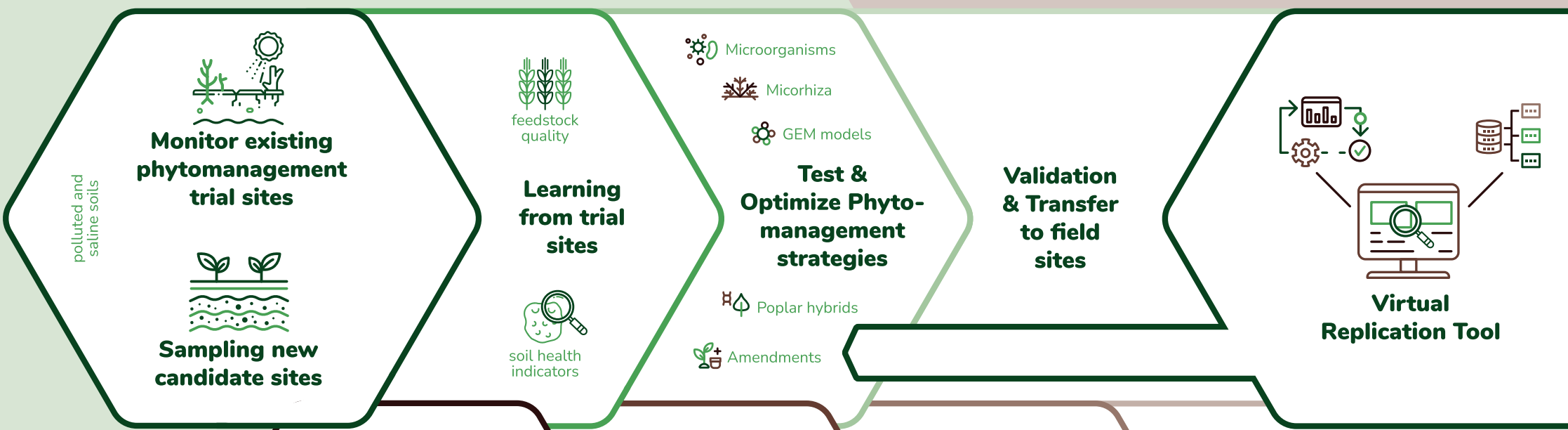
Objectives

- Investigation and monitoring of new and long-term existing phytomanagement trial sites.
- Optimisation of phytomanagement strategies based on lessons learned.
- Improvement of extraction and valorisation of lignocellulosic biomass fractions (cellulose, hemicellulose and lignin) and quality characterisation for use in textile applications.
- Development of an open source Virtual Replication Tool based on modelling and optimisation modules, available for similar initiatives.
- Evaluation of technical, economic, social and environmental viability.
- Fostering social acceptance and maximising the project's impact through effective communication and stakeholder engagement.

Project Concept

Starting at Technology Readiness Level (TRL) 3-4, the pHYBi project partners test, optimise and develop several phyto-management strategies and biomass extraction processes in laboratory settings. These phytomanagement strategies are then validated in pilot field trials, while the biomass extraction processes are tested in a small to medium scale pilot plant. The project aims to reach TRL 5 by the end of the project, following the outlined methodology:

Phytomanagement Strategies



Biomass
Valorization