ALL4BIOREM
Soil, seawater and groundwater pollution remediation for a healthier Europe

Introduction

Soil, seawater and groundwater pollution pose a severe risk to the environment, public health, and food security. The ALL4BIOREM Cluster addresses the challenge of restoring contaminated soils and water by providing tools and methods and helping stakeholders develop targeted, effective strategies for sustainable and risk-based land management. This effort contributes to the European Green Deal's goal of Zero Pollution by reducing soil and water contamination and promoting sustainable land use.

ALL4BIOREM
Alliance for Environmental Bioremediation

The cluster

The ALL4BIOREM Cluster is formed by MIBIREM, BIOSYSMO, EDAPHOS, ISLANDR, NYMPHE, and SYMBIOREM to tackle soil, seawater, and groundwater pollution from diverse angles.

Addressed challenges

- Identifying pollution sources: Detect soil and water pollution sources to better target remediation efforts.
- Empowering smarter investments: Enhance knowledge of water, land and soil pollution to help private and public land managers better prioritise and plan restoration investments.
- Industrial validation of bioremediation solutions: description?
- Boost Microbiome Integration: Develop integrated workflows to combine -omics data with environmental data, to increase the potential of microbiome-based bioremediation
- Develop low-input solutions for clean-up of complex sites: Many contaminated sites are challenging or too costly to excavate due to pollutant depth and location.This is neither the most feasible solution for each case.

Main results

- Harmonisation of interoperability between contamination data from different sources and different member states.
- Development of innovative financial models to promote remediation actions on contaminated sites.
- Spatial planning strategies to prioritise and promote remediation action and reuse of water and soil.
- Roadmaps to guide different actors related to remediation from site identification through vision and planning to realisation and maintenance of sites.
- Improved bioremediation strategies and microbial consortia for the treatment of organic pollutants in soil and water.
- Integrated systems for bioremediation of soil and water (e.g. by combined phytoremediation and carriers/BES) for the treatment of complex mixtures.

The **HRB - Horizon Result Booster** is an initiative funded European Commission, Directorate General for Research and Innovation, Unit J5, Common Service for Horizon 2020 Information and Data.

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Who benefits?

- Researchers & Academia
- Policy makers & Funding agencies
- Large Enterprises
- Innovation Platforms & Clusters
- Civil society, NGOs & Citizens
- Start-ups & SMEs

Project Group

MIBIREM

MIBIREM project will develop a unique toolbox for highly efficient bioremediation environmental applications of microbiomes. The project will develop molecular methods for the monitoring, isolation, cultivation and subsequent deposition of whole microbiomes.
www.mibirem.eu

BIOSYSMO

BIOSYSMO is a 48-month action that will develop a computationally-assisted framework for designing and optimising synergistic biosystems combining the required pathways and traits to achieve the most efficient degradation and sequestration of pollutant mixtures.
www.biosysmo.eu

symbiorem

SYMBIOREM project (Symbiotic, circular bioremediation systems and biotechnology solutions for improved environmental, economic and social sustainability in pollution control) aims to use the bioremediation capabilities of microorganisms, microbiomes, proteins, plants and animals to remove pollution from the environment.
symbiorem.eu

NYMPHE

Nymphe is a four years European project dedicated to tackling environmental pollution by developing innovative bioremediation solutions.
www.nympheproject.eu

EDAPHOS

EDAPHOS project aims to implement innovative technologies to monitor polluted soils and implement nature-based solutions to accelerate their restoration and ensure that the processes developed can be integrated into a commercial offer.
www.edaphos.eu

ISLANDR for Soil Health

The Information-based Strategies for Land Remediation, in short ISLANDR, is a multidisciplinary project, which is foremost aimed at supporting the execution of the EU mission: A Soil Deal for Europe.
islandr.eu

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