PROJECT OBJECTIVES

Advanced Decontamination

Develop innovative processes for effective decontamination of waste wood, ensuring safe reuse of materials in high-value applications.

Bio-based Materials

Create acrylic acid, fatty acids, and bio-based binders from cellulose and hemicellulose fractions of waste wood.

Enhanced Coatings

Enhance coatings' water resistance and durability through grafting components onto hemicellulose, creating high-performance, sustainable products.

International Collaboration

Foster collaboration between 11 partners from 6 countries to bring together diverse expertise and tackle challenges from multiple angles.

Comprehensive Circularity

Implement a holistic approach that minimises waste and promotes recovery of valuable resources from process residues.

Market Viability

Develop economically viable processes and products that can be successfully commercialised, ensuring sustainable impact beyond the project.

PROJECT IMPACTS

Resource Efficiency

Advanced decontamination and fractionation processes ensure that every part of waste wood is utilized, maximizing resource efficiency and diverting waste from landfills.

Circular Economy

Creating a closed-loop system where contaminated wood is transformed into protective materials for other wood products, embodying circular economy principles.

Environmental Restoration

Using process residues for biochar production that can be applied for bioremediation of contaminated soils and mineral recovery, supporting ecological health.

Contact Us

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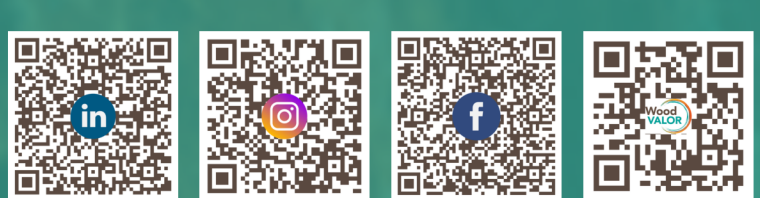

CIRCULAR CONCEPT

Post-industrial sources of contaminated waste wood

Building Industry
Mining
Wood collectors/recyclers

Decontamination & Fracionation

Contaminant Removal
Fractionation
Minerals/metals recovery

Production of biobased materials

- Cellulose saccharification > Pigments
- Lactic acid via bioprocessing and hydrolysis fermentation> Acrylate esters
- Lipid biosynthesis > Fatty acids
- High MW emulsifiers & stabilizers
- Biochar via pyrolysis

Industrial Applications

Industrial formulations (paint, coatings, adhesives, sealants)
Soil amendment, especially for mining area rehabilitation