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Transforming agrifood residues into valuable bio-based materials

2025-2028

Exploiting Modular Biochar and board production plants to locally transform waste from traditional agrifood, feed and forestry industries into bio-materials with regional DEMAND.



Funded by the European Union under grant agreement 101182442. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them.



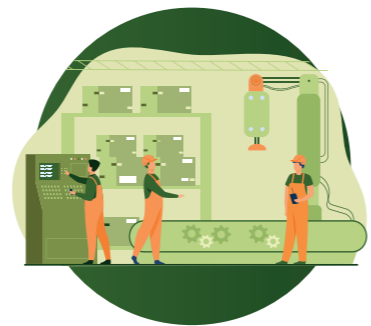
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About the project

Europe's agri-food and forestry industries generate large volumes of residues such as olive pomace, grape marc, cork bark or grass press-cake. EMBEDED will demonstrate modular solutions to transform these undervalued by-products into climate-positive materials



Objectives



Modular plants for bio-materials production



Pyrolysis demo: 50 tons valorised



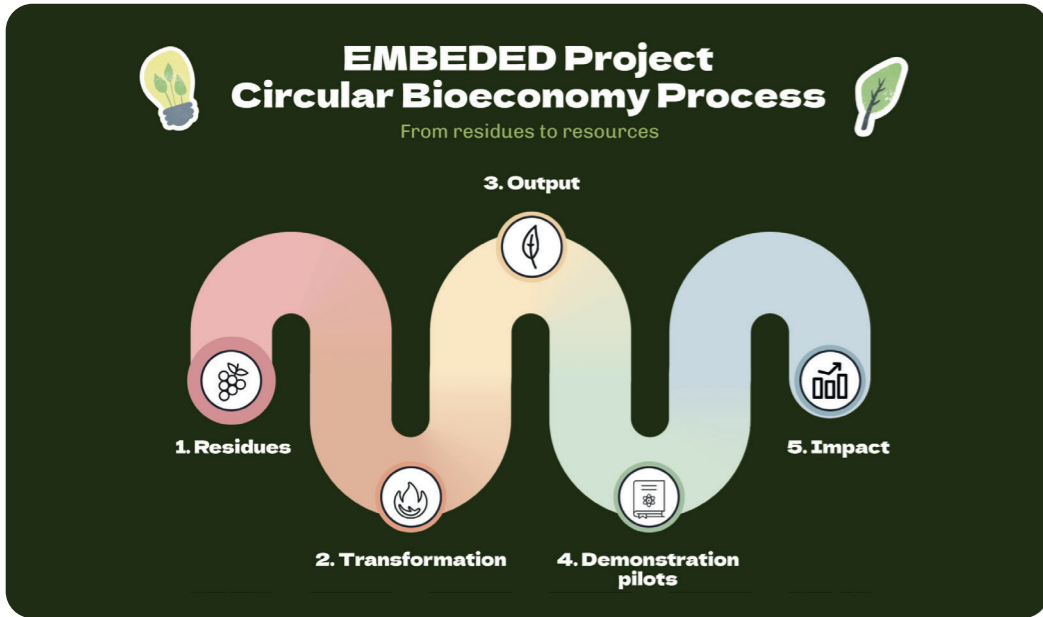
Cork waste board production demonstration



Impact

EMBEDED will foster a climate-neutral bioeconomy by using modular technologies to valorise underused agricultural and forestry residues.

Through portable pyrolysis and cascade valorisation, it will turn over 50 tonnes of biomass into biochar, biofertilisers, and other climate-positive materials—avoiding up to 1.5 tonnes of CO₂ per tonne of biochar. The project empowers producers, promotes cleaner land management, and improves GHG accounting with regional data, while open calls, training, and demos will boost uptake across Europe.



Certification of bio-materials and biofertilisers



Business cases for pyrolysis and boards



Clustering with stakeholders and authorities

15 Participants	4 European Countries	5 Million Euros Funded	3 Years of Duration
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