



Project Partners

ESCIB is a collaborative effort across Europe, involving universities, research institutes and industry leaders to bring together the best of knowledge.



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Advancing Sustainability and Circularity Assessment for Europe's Bioeconomy



The ESCIB project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101135071.

ESCIB stands for Developing Environmental Sustainability & Circularity Assessment Methodologies for Industrial Bio-based Systems.

It aims to strengthen the bio-based economy's sustainability across Europe.

With the increasing global focus on reducing environmental impact and enhancing the sustainability of products, many innovations and novel technologies are being developed to produce materials and goods from biomass or waste.

Life cycle assessments (LCAs) are crucial to evaluate the environmental performance of these products against conventional ones, but these assessments face methodological challenges, especially for products still under development.

Four Key Sectors for Real-World Impact

ESCIB collaborates with five industry partners in packaging, textiles, chemicals, and construction industries. Partner product data is crucial for developing and testing the ESCIB methodologies within practical case studies.

Our Innovative Approach

- Developing spatial-temporal land use models to be incorporated in LCA.
- Elaborating consequential LCA for future impact forecasting.
- Developing a consistent method to trace biogenic carbon through the bio-based value chains.
- Establishing circularity assessment criteria and indicators that reflect the value of biomass cascading and resource efficiency.
- Crafting guidelines for prospective LCA of early-stage bio-based systems.

