

Impact

LCA4BIO is a pioneering project aimed at developing and validating a new suite of enhanced, standardized, and precise methodologies tailored for assessing environmental impacts and circularity within bio-based systems.

These methodologies will be instrumental in facilitating the green transition of the European industry by providing practical tools to evaluate the sustainability performance of bio-based products.

LCA4BIO will lead the development of assessment methodologies to properly evaluate environmental impacts and circularity, that can be applied in certification schemes in mature bio-based Systems and will address the development of new prospective life cycle assessment methodologies, considering up-scaling and future scenarios for emerging bio-based Systems.



The substitution of fossil-based technologies by bio-based ones



Development of sustainability and circularity criteria, and its implementation in new guidelines and certification for bio-based products to demonstrate the sustainability of their activities and circularity of the materials involved in their production



Improved prospective LCA methodologies will be developed, based on novel IAMs that will use manageable levels of uncertainty



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Fossil resource depletion and environmental impacts underscore the **urgency for change**.

PROJECT PARTNERS



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Get in touch with us for further information:

anahi.fernandez@contactica.es

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Life Cycle Assessment methods
for sustainable and circular BIO
based systems

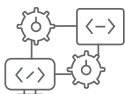


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Objectives

The main objectives for the LCA4BIO project are focused on pioneering advancements in environmental assessment methodologies tailored specifically for bio-based systems. Our primary goals include:



Develop enhanced methodologies for assessing environmental impacts and circularity in bio-based systems.



Validate the reliability and precision of the developed assessment tools.



Facilitate the green transition of European industries by providing practical sustainability evaluation methods for bio-based products.



Address prospective life cycle assessment methodologies, considering upscaling and future scenarios.



Foster collaboration among stakeholders in the bioeconomy value chain to ensure the adequacy and applicability of the developed methodologies.

As the EU's Climate Target Plan drives industries

As the EU's Climate Target Plan drives industries towards drastic reductions in greenhouse gas emissions, the shift from fossil-based to bio-based systems becomes imperative. Fossil resource depletion and environmental impacts underscore the urgency for change.

In response to this call, **LCA4BIO** spearheads the development of advanced methodologies for environmental assessment in bio-based systems. **LCA4BIO** goal is to provide precise, reliable, and harmonized evaluation tools that demonstrate the superior performance of bio-based products. By identifying the best available technologies, we pave the way for sustainable industrial practices, aligning with the European Commission's zero-pollution objectives.



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Work Packages

WP 1

PROJECT MANAGEMENT

WP 2

IMPROVED METHODOLOGIES FOR ENVIRONMENTAL SUSTAINABILITY AND CIRCULARITY ASSESSMENT OF BIO-BASED SYSTEMS (Bbs)

WP 3

IMPROVED PROSPECTIVE LCA (pLCA) METHODOLOGY FOR LOW-TRL BIO-BASED TECHNOLOGIES

WP 4

TRADE-OFFS AND SYNERGIES CAUSED BY THE GROWTH OF BIO-BASED SYSTEMS

WP 5

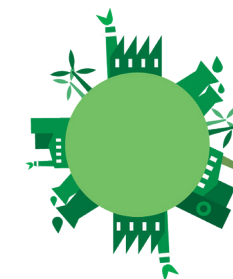
VALIDATION AND TESTING OF DEVELOPED LCA METHODOLOGIES

WP 6

ENSURING THE APPLICABILITY OF LCA METHODOLOGIES TO ALLOW CERTIFICATION OF BBS AND ASSESS THE ENVIRONMENTAL PERFORMANCE OF LOW-TRL BBS

WP 7

COMMUNICATION, DISSEMINATION AND EXPLOITATION



LCA4Bio project Life Cycle Assessment methods for sustainable and circular BIO based systems