

## CALIMERO project reaches a key milestone: Advancing sustainability with enhanced methodologies and transformative insights for bio-based industries

- *CALIMERO advances assessment methodologies by integrating circular economy principles, evaluating raw material criticality, and improving carbon footprint and life cycle impact assessment approaches.*
- *Enhanced indicators for job creation, worker health and safety, toxicity, and economic profitability enable a more comprehensive evaluation of sustainability impacts in bio-based sectors.*

**Madrid, Spain. 28 January 2025** - The **CALIMERO** project is nearing the final phase of its three-year research initiative, having made significant progress in enhancing the sustainability evaluation of bio-based industries in Europe. Focusing on refining environmental performance metrics, **CALIMERO** aims to provide more accurate and reliable tools for assessing sustainability across various industrial sectors.

One of the key innovations of the **CALIMERO** project is improving the European Product Environmental Footprint (PEF) method. This method, widely used to assess the environmental impact of products, has been enhanced to better account for the specific challenges and opportunities of bio-based industries. By integrating circular economy principles and advancing the Life Cycle Sustainability Assessment (LCSA) framework, **CALIMERO** enables a more comprehensive evaluation of environmental impacts throughout the life cycle of bio-based products. This includes refining the methodologies for carbon footprint measurement and circular economy metrics for reducing their environmental impact.

Beyond environmental considerations, **CALIMERO** also emphasizes the importance of social and economic factors in sustainability assessments. The project has developed new indicators for measuring key aspects such as job creation, occupational health and safety, and financial profitability, helping industries understand their broader impact on society. These additions ensure that sustainability evaluations encompass both environmental social and economic dimensions, providing a holistic view of bio-based industries' contributions to communities and economies.

Significant progress has been made in identifying critical points at the environmental, economic, and social levels in the sectors examined by **CALIMERO** (construction, pulp and paper, textiles, biochemicals, and woodworking). These efforts are laying the groundwork for future recommendations as **CALIMERO** continues to advance its methodologies. Initial work focused on applying conventional sustainability analysis techniques to reference case studies, providing a comprehensive baseline of the current performance in these sectors.

Building on this foundation, upcoming activities will use newly developed tools and methodologies to reassess these case studies. These improved approaches will enable a more accurate and detailed evaluation of the environmental, economic, and social impacts, offering deeper insights into potential areas for improvement and innovation. Progress is already underway with specialized software for the second type of case study, which involves simulations using optimization tools. The results of these simulations are expected to be presented towards the end of the project, providing valuable guidance for improving sustainability in bio-based sectors.

**CALIMERO** is also implementing the theory of change, a framework designed to identify impacts in the sectors and  
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explore pathways for achieving sustainability-driven change. This approach is coupled with ongoing efforts to communicate these findings effectively to support the transition to more sustainable practices. Simultaneously, a comprehensive literature review is underway to identify the challenges specific to sustainability analysis in **CALIMERO's** bio-based sectors.

The project has already completed the definition of its case studies. Building on these results, **CALIMERO** has made significant progress in identifying critical hotspots and collecting detailed life cycle data from the five bio-based sectors above mentioned. These efforts, combined with the application of newly developed tools and methodologies, are enabling a more precise evaluation of sustainability impacts and systemic improvements. Additionally, advancements in the framework for understanding and driving systemic change are laying the groundwork for impactful recommendations that address particular challenges per bio-based sector.

In summary, **CALIMERO** has entered its final phase, building on significant milestones already achieved. These include the identification of critical points, the completion of case study definitions, comprehensive data collection from key sectors, and advancements in the framework for driving systemic change. With promising results expected from the application of improved methodologies to the case studies, **CALIMERO** is well-positioned to deliver impactful recommendations. This project underscores a continued commitment to enhancing sustainability in bio-based sectors and plays a significant role in transforming practices towards more responsible and efficient approaches.

The outcomes of **CALIMERO** are made available through publicly accessible deliverables on the project website. As the project progresses, additional advancements in the characterization of biodiversity and ecosystem services are expected by mid-2025. These developments will be compiled into actionable guidelines designed for use by policymakers, industry leaders, and researchers alike, ensuring that sustainability assessments are grounded in practical, real-world applications.

## About **CALIMERO**

**CALIMERO** is a European project aimed at **creating a common framework for Life Cycle Assessment methodologies** tailored to specific sectors of bio-based industries. By assessing their processes, the project seeks to identify the main sources of pollutants, optimize resource use, and evaluate potential solutions to decrease environmental impacts. Additionally, **CALIMERO** addresses broader sustainability aspects, such as improving social and economic performance, to support the transition towards more sustainable and responsible practices in these sectors.

The **CALIMERO** Consortium, composed of 12 partners from seven countries, brings together expertise from across research, industry, and policy sectors. Coordinated by Contactica, the project covers five critical sectors: construction, woodworking, textiles, pulp and paper, and biochemicals. With a total budget of €3,518,900, the project is set to conclude in 2025, leaving behind a legacy of improved sustainability practices and tools for bio-based industries across Europe.

For more information about the **CALIMERO** project, contact:

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