

New ReBioCycle project on novel recycling and upcycling solutions for bioplastics

Berlin, 2 October 2024 – The new EU funded ReBioCycle project provides a portfolio of bioplastic sorting and recycling technologies within three complementary waste-processor-centric hubs. These hubs will be established for different technologies and technology readiness levels (TRL) in the Netherlands, Italy, Spain and partly in Ireland. They will be focusing on mechanical recycling, chemical recycling, enzymatic recycling and microbial recycling.

The [ReBioCycle](#) project kickoff will take place at the University College Dublin on 2-3 October 2024. European Bioplastics and its members, including TotalEnergies Corbion, AIMPLAS, Novamont, Corbion, Sulapac, and Kaneka are amongst the 20 partners that have joined forces for developing and implementing "A new European blueprint for circular bioplastics upcycling solutions", under the lead of the [University College Dublin](#) and [BiOrbic Bioeconomy SFI Research Centre](#).

At a demonstrative scale and in the real operational environment for the effective and efficient recycling of three types of bioplastics: PLA, PHA and Composites, the project aims to demonstrate the higher impact of obtaining the same or superior grade of recycled polymers in higher-value applications.

Jan Pels CTO and Managing Director of TORWASH, leader of the Dutch hub, indicates that currently *"The current recycling technologies available for recycling biodegradable plastics are limited, but with this project we are going to make them widely available. Then nobody can claim that the switch to biodegradable plastics cannot be made, because they cannot be recycled"*.

Prof. Kevin O' Connor, coordinator of the project, expects that *"ReBioCycle will scale up and demonstrate biobased biodegradable plastics recycling technologies: Biobased biodegradable plastics can be kept in the material cycle for as long as possible through innovative recycling technologies thus demonstrating that end-of-life biobased biodegradable plastics can be used in the circular bioeconomy."*

ReBioCycle will verify the industrial grade specifications by biopolymer brand owners and via demonstration of real-world products: durable and multi-use packaging. A Life Cycle Assessment analysis and tailored dissemination and exploitation plans will facilitate key exploitable results' uptake.

ReBioCycle will effectively separate the three types of bioplastics by re-adapting and upscaling sorting technologies. It will also propose a portfolio of bioplastics recycling technologies at a relevant scale and demonstrate through data streams the effectiveness of the proposed technologies, their economic viability, and their possible integration at an industrially relevant scale, while also demonstrating that biodegradable plastics are fully recyclable and up-cyclable. Finally, an analysis of final quality of the material will be performed to confirm the quality of the recycled materials from a functional point of view.

Gerrit Gobius du Sart, Corporate Scientists of TotalEnergies Corbion, indicates that *“The bioplastics industry has a responsibility to preserve material value, in order to minimize our impact on our environment. Valorising PLA waste as a feedstock for either chemical or mechanical recycling is an enormous opportunity.”*

The project will result in a Blueprint, which is a position paper on the state of the art of bioplastics recycling, to provide direct contribution to several European action plans and strategies, such as the Bioeconomy Strategy, the Circular Economy Action Plan, and also the future Packaging and Packaging Waste Regulation. Hasso von Pogrell, Managing Director of European Bioplastics indicates that *“European Bioplastics strongly believes that an actionable EU Bioeconomy Strategy should be a top priority to safeguard the strength of our European industries. This is only possible with a strong collaboration between all stakeholders, more policy support, and technological advancement. This project is an outstanding example of this collaboration and will bring great advancement to the recycling of bioplastics”.*

The ReBioCycle project has received 7.5 M EURO funding from the Circular Bio-based Joint Undertaking (JU) and its members under the European Union's Horizon Europe Research and Innovation Programme under Grant Agreement No. 101156032. The JU receives support from the European Union's Horizon Europe Research and Innovation Programme and the Bio-based Industries Consortium.

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About European Bioplastics

European Bioplastics (EUBP) is the European association representing the interests of the bioplastics industry along the entire value chain. Its members produce, refine and distribute bioplastics i.e. plastics that are biobased, biodegradable, or both. More information is available at www.european-bioplastics.org

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