



## Bio-based Industries Research and Innovation action

**CALL IDENTIFIER:** H2020-BBI-JTI-2019

**TOPIC:** BBI-2019-SO2-R2

**GRANT AGREEMENT NO:** 887115

**PROJECT ACRONYM:**



**PROJECT TITLE** Combining carboxylic acid production and fibre recovery as an innovative, cost effective and sustainable pre-treatment process for heterogeneous bio-waste

**PROJECT WEBSITE** [www.cafipla.eu](http://www.cafipla.eu)

## D7.15 Summary on project press releases

**START DATE OF PROJECT** 01.06.2020

**DURATION OF PROJECT:** 36 Months

**DELIVERY DATE:** Month 36

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**KEYWORDS** Press release, communication, stakeholders, reach

**DISSEMINATION LEVEL:** PU-Public

This project has received funding from the Bio Based Industries Joint Undertaking (JU) under the European Union's Horizon 2020 research and innovation programme under grant agreement No 887115. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Bio Based Industries Consortium

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This deliverable has been prepared in the context of the project CAFIPLA receiving funding from the Bio Based Industries Joint Undertaking (JU) in accordance with the grant agreement No 887115. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Bio Based Industries Consortium.

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Please refer to this deliverable as:

CAFIPLA – D7.15 (2023), Deliverable D7.15 Summary on project press releases, May 2023.

## EXECUTIVE SUMMARY

The goal of CAFIPLA is to develop an integrated pre-treatment process to convert heterogeneous organic materials to building blocks for the bio-based economy. To reach this aim, the CAFIPLA project focusses on an integrated biomass valorisation strategy that combines a carboxylic acid and a fibre recovery platform (CAP/FRP).

CAFIPLA is a market-oriented, R&D-driven project strongly relying on an interdisciplinary approach, both within the consortium as through stakeholder involvement. Therefore, a strong dissemination, communication, and exploitation strategy is fundamental for the project's success and the exploitation of the project results beyond.

The present document “D7.15 Summary on project press releases” summarises the press releases that were published by the CAFIPLA partners to promote and disseminate the project concept and findings to a broad audience of Academia, relevant Industries and Society and foster the engagement and exchange between CAFIPLA and these important stakeholders. The main goal is to inform a wider public group about the progress, major outcomes and milestones achieved in the project and encourage interaction.

The content of the press releases as well as a table for a better overview are presented below. All press releases can be accessed via links on the CAFIPLA website<sup>1</sup>.

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<sup>1</sup> [https://cafipla.eu/home\\_cafipla/ongoing/publication-and-media/](https://cafipla.eu/home_cafipla/ongoing/publication-and-media/)

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## ABBREVIATIONS

ABBREVIATION	DESCRIPTION
ATB	Leibniz Institute for Agricultural Engineering and Bioeconomy
CAP	Carboxylic Acid Platform
DEC	DECHEMA Gesellschaft Für Chemische Technik und Biotechnologie e.V.
DBFZ	Deutsches Biomasseforschungszentrum Gemeinnützige GmbH
FRD	Fibres Recherche Developpement
FRP	Fibre Recovery Platform
IDE	IDELUX Environnement
MCCA	Medium-chain carboxylic acids
MP	Microbial protein
UGent	University of Ghent
TEC	Fundación Tecnalia Research & Innovation

## 1 INTRODUCTION

The deliverable “D7.15 Summary on project press releases” of the CAFIPLA project is part of WP7: Dissemination, communication, and exploitation (Task 7.2 Dissemination) and summarises the press releases prepared by DECHEMA and the CAFIPLA partners. These were published to promote the CAFIPLA project and to reach a wider readership. The press releases are seen as a communication tool to reach partners but also outsiders and to present the latest progress of the project.

The overall aim of CAFIPLA is to develop an integrated pre-treatment process to convert heterogeneous organic materials to building blocks for the bio-based economy. To reach this aim, the CAFIPLA project focuses on an integrated biomass valorisation strategy that combines a carboxylic acid and a fibre recovery platform (CAP/FRP). Since CAFIPLA is a market-oriented, R&D driven project that strongly relies on the interdisciplinary approach within the consortium as well as through active stakeholder involvement. Therefore, a strong dissemination, communication, and exploitation strategy is fundamental for the project's success and the exploitation of the project results beyond. Hence, the press releases were planned as part of the project’s Plan for Dissemination & Exploitation of Results<sup>2</sup>.

In this deliverable, all texts of the press releases are listed (without images). Initial tables provide an overview detailing the title of the press releases, the publication date, the publishing partner and a link to the respective article.

## 2 PRESS RELEASES

### 2.1 PRESS RELEASE NO. 1

<b>Press release No. 1</b>	<b>CAFIPLA: the EU project to develop an integrated strategy for the valorisation of biomass by combining a carboxylic acid and fiber recovery platform started on 1st of June 2020</b>
Date	09.07.2020
Publisher	DECHEMA
Online Access	<a href="https://cafipla.eu/wp-content/uploads/2021/08/PM_1_Homepage.pdf">https://cafipla.eu/wp-content/uploads/2021/08/PM_1_Homepage.pdf</a>

CAFIPLA: THE EU PROJECT TO DEVELOP AN INTEGRATED STRATEGY FOR THE VALORISATION OF BIOMASS BY COMBINING A CARBOXYLIC ACID AND FIBER RECOVERY PLATFORM STARTED ON 1ST OF JUNE 2020

**Over the next three years, the CAFIPLA project promises to develop an innovative approach to bio-economic applications by approaching the use of biomass more pragmatically than usual. Potential biomass supply chains will be identified and business models for future implementation will be examined.**

The use of biomass for the bio-economy is mainly based on the use of raw materials based on sugar or starch. They can be associated with high costs for the environment in terms of land use and the

<sup>2</sup> CAFIPLA – D7.6 (2022), Deliverable D7.6 Updated Plan for Dissemination & Exploitation of Results (PDER v2), October 2022.

consumption of energy and chemical resources. On the other hand, cities and rural regions have a great potential of biowaste streams which, due to their heterogeneity, are currently only valorised to a limited extent or used exclusively in applications of lower economic value. If 2nd generation raw materials such as straw, wood chips or other residues are used, complex pre-treatment methods are required. In order to increase the use of bio-waste as a source of raw materials for the bio-economy, a completely new approach is required.

Over the next three years, the EU project CAFIPLA will develop an integrated strategy for the valorisation of biomass that combines carboxylic acid and fibre recovery in one platform. The aim of this combination is the recovery of fatty acids and fibres from biogenic residues and waste materials and their further conversion into economically relevant compounds. A TRL5 pilot will demonstrate the CAFIPLA upscaling potential. CAFIPLA will furthermore study the biomass supply chain and the business models for future implementation. The well-balanced consortium, including 7 SMEs on 13 participants, will ensure successful research and impact on the bio-economy well beyond the project consortium and timing. DECHEMA is responsible for the market analysis, participates in the LCA (Life Cycle Analysis) and is managing marketing, dissemination and communication activities.

## 2.2 PRESS RELEASE NO. 2

<b>Press release No. 2</b>	<b>Market analysis demonstrates: Bio-based products from mixed biowaste are profitable</b>
Date	27.08.2021
Publisher	DECHEMA
Online Access	<a href="https://cafipla.eu/wp-content/uploads/2021/09/CAFIPLA_PM_2.pdf">https://cafipla.eu/wp-content/uploads/2021/09/CAFIPLA_PM_2.pdf</a>

### MARKET ANALYSIS DEMONSTRATES: BIO-BASED PRODUCTS FROM MIXED BIOWASTE ARE PROFITABLE

**The market analysis conducted as part of the BBI-funded CAFIPLA project, which is developing a new technology for obtaining biobased chemicals and products from biowaste, shows high potential for four customized biobased products in the initial economic assessment.**

The market assessment included consideration of CAFIPLA processes and four potential future products. CAFIPLA target products include polyhydroxyalkanoates (PHA), which can be used as biobased and biodegradable plastics or bio composites. Medium chain carboxylic acids (MCCA) in the form of MCCA bio-oil can be used as antimicrobial feed additives. Further, microbial proteins considered in CAFIPLA offer good possibilities as slow-release fertilizers or food and feed additives. Reinforced natural fibres have high environmental benefits and are relevant for the insulation and construction market segments.

“The market analysis demonstrated that all products have high market potential and address market segments with already high market volumes. To achieve market entry, the next step is to consider individual obstacles and overcome them during the project.” Lea König and Karoline Wowra, DECHEMA e.V.

Based on the application areas, potential markets were defined, their production volumes and annual sales were compiled, and the currently largest manufacturers were identified. In addition, the

technical-economic, environmental, and legal framework conditions were examined and evaluated for opportunities and challenges for the products.

CAFIPLA offers an alternative concept for biogas plants by upgrading heterogeneous biowaste streams. The project combines carboxylic acid production (CAP) and fibre recovery (FRP) in two platforms. This combination aims to further convert carboxylic acids and fibres into economically relevant compounds in a TRL 5 demonstration plant.

In the CAFIPLA project, 13 partners from across Europe, including seven SMEs, are taking up the challenge of developing new platforms for the economic conversion of biowaste into higher value products. They are supported by research institutes, universities, and large industrial companies. DECHEMA Society for Chemical Engineering and Biotechnology, as one of the project partners, conducted the market analysis, which is available for free download on the website.

### 2.3 PRESS RELEASE NO. 3

Press release No. 3	Creating garbage bags from waste?
Date	31.07.2020
Publisher	IDELUX
Online Access	<a href="https://www.lavenir.net/regions/luxembourg/2020/07/31/creer-des-sacs-poubelle-avec-des-dechets-7BDK3EHTMJBGNFABONON5XIA6E/">https://www.lavenir.net/regions/luxembourg/2020/07/31/creer-des-sacs-poubelle-avec-des-dechets-7BDK3EHTMJBGNFABONON5XIA6E/</a>

Press release No. 3 was published in French by IDELUX and taken up by Belgian newspapers (Figure 1). An English translation of the original text is provided below.

#### **Creating garbage bags from waste?**

The third European BBI project in which Idelux Environnement is a partner is called CAFIPLA. It was launched in June and will last three years. The project suggests a new pre-treatment of biowaste. The aim is to extract certain fibres and carboxylic acids. The fibre recovery platform will produce intermediate products that can be used as packaging material or insulation.

"Why not create garbage bags?" asks Marie-Aline Pierrard. The pilot test will take place at our processing site in Tenneville. Europe's intention is also to set up a circular bioeconomy. Moreover, on our biomethanisation site in Tenneville, the production of methane allows us to produce electricity and heat, which is used on the same site.



L'Avenir Luxembourg

VENDREDI 31 JUILLET 2020

**IDÉLUX**  
 ENJEUX [4/5]

« Transformer les déchets des citoyens en de nouvelles matières premières. »

**3** Idélux est partenaire de trois projets européens innovants sur les déchets.

**Des études sont menées pour mieux valoriser nos déchets**



# Des insectes pour “manger” le plastique

**Transformer nos déchets biodégradables en matière première, des insectes pour « manger » le plastique. Idélux est partenaire de projets européens pointus.**

• **Jordane MEYER**

Le service Environnement de l'intercommunale Idélux porte un intérêt particulier aux nouvelles technologies de valorisation des déchets et est d'ailleurs partenaire de plusieurs projets européens innovants.

Financé par l'Europe via le programme Horizon 2020, le projet Volatile est le plus abouti. D'une durée de quatre ans, il prendra fin en octobre prochain. Il s'agit du tout premier projet de recherche et de développement permettant aux chercheurs de trouver de nouvelles techniques de valorisation des déchets.

**De nouvelles matières premières**

Concrètement, il s'agit d'un projet visant à fournir différentes biomasses, c'est-à-dire de la matière organique d'ori-

gine végétale, animale ou bactérienne que l'on peut utiliser comme source d'énergie et ce, à l'aide d'un digesteur anaérobie. Il s'agit d'une cuve utilisée pour produire du biogaz.

L'objectif est d'arriver à extraire des molécules de ces déchets pour produire quelque chose qui a de l'intérêt, comme du plastique, de l'Omega 3 ou encore de l'huile. Et donc en gros, transformer la poubelle biodégradable des citoyens en de nouvelles matières premières.

Presque quatre ans après le début du projet, on peut dire que celui-ci a bien fonctionné puisque du film plastique a en effet pu être créé.

Le projet-pilote a été réalisé aux Pays-Bas, mais le processus demande encore du travail avant d'être officiellement appliqué.

À terme, il pourrait permettre à l'intercommunale d'aug-



Idélux est l'un des partenaires de plusieurs projets européens « révolutionnaires » visant à mieux valoriser les déchets.

menter son rendement mais aussi de diminuer le coût du traitement des déchets des citoyens.

« C'est intéressant pour Idélux Environnement, explique Marie-Aline Pierrard, chef de projets chez Idélux Environnement. Nous pouvons bénéficier de subventions pour ce genre de projets et nous voulons créer une opportunité pour la province de Luxembourg. »

**Avec l'aide d'insectes**

Le projet BBI (Bio-Based Industries) européen Recover vise, quant à lui, à utiliser des micro-organismes pour dé-

grader des morceaux de plastiques que l'on retrouve dans les déchets organiques. Par exemple le film agroalimentaire qui n'est pas biodégradable et dont on retrouve de petites particules.

Concrètement, cela consisterait à identifier et stimuler des enzymes, c'est-à-dire des substances organiques produites par des cellules vivantes, dans le système digestif d'insectes ou de vers de terre. Cela permettrait de nettoyer certains sites pollués.

Le projet a débuté en juin 2020 et durera quatre ans également. Pour l'instant, le pro-

jet n'en est qu'à l'état de recherche et de développement.

« Il faudra encore attendre pour le mettre en application sur le terrain, reprend Marie-Aline Pierrard. Il faut encore que nous choisissons le ou les types de plastiques concernés et ensuite, nous choisirons le type de bactéries et d'enzymes dont il faudra stimuler la production dans l'organisme des insectes. L'idée est donc de fortifier l'appareil digestif d'un type d'insecte.

Nous essayons de rester au courant des dernières innovations même si rien ne va aboutir directement. » ■

## Créer des sacs-poubelle avec des déchets ?

Le troisième projet BBI européen auquel Idélux Environnement est partenaire se nomme Cafipla. Il a été lancé en juin et durera trois ans.

Le projet suggère un nouveau pré-traitement des biodéchets. Le but est d'en extraire certaines fibres et acides carboxyliques. La plateforme de récupération des fibres donnera lieu à des produits intermédiaires qui pourront être valorisés comme matériau d'emballage ou isolant.

« Pourquoi pas créer des sacs-poubelle, s'interroge Marie-Aline Pierrard. Le test-pilote se déroulera sur notre site de traitement de Tenneville. La volonté de l'Europe est également de mettre en place une bio-économie circulaire. De plus, sur notre site de biométhanisation à Tenneville, la production de méthane nous permet de produire de



Produire des matières premières à l'aide de biodéchets est l'un des objectifs de l'intercommunale.

l'électricité et de la chaleur, utilisée sur ce même site. » ■ J.M.

## Les capsules Nespresso ? Pas dans la partie « verte »

Le recyclage fait partie du quotidien de chaque citoyen. Mais tous ne s'y attellent pas correctement. « Certaines personnes ne trient pas très bien, déplore la cheffe de projets. Cela pose parfois des problèmes pour les broyeurs et les tamis. Ce qui n'est pas bien trié se retrouve dans les composts qui se retrouvent ensuite dans des zones agricoles. Cela peut également être dangereux sur nos différents sites, notamment pour le personnel sur le terrain. Nous retrouvons beaucoup

de choses comme des piles, des sprays aérosols. Tout n'est pas automatisé et nous souhaitons faire entendre notre voix en tant qu'usine de traitement et faire changer les mentalités. »

Trop souvent, des déchets qui n'ont rien à y faire se retrouvent dans les poubelles biodégradables comme des capsules Nespresso ou encore les étiquettes que l'on retrouve sur les fruits. Des détails qui font une grande différence pour l'environnement.

Figure 1: Original French version of Press release No. 3 by IDELUX.

## 2.4 PRESS RELEASE NO. 4

<b>Press release No. 4</b>	<b>TECNALIA participates in the development of a pre-treatment process for organic waste</b>
Date	15.12.2021
Publisher	TECNALIA
Online Access	<a href="https://www.tecnalia.com/en/news/tecnalia-participates-in-the-development-of-a-pre-treatment-process-for-organic-waste">https://www.tecnalia.com/en/news/tecnalia-participates-in-the-development-of-a-pre-treatment-process-for-organic-waste</a>

THE CAFIPLA INITIATIVE WILL PROVIDE AN ECONOMICALLY FEASIBLE AND ENVIRONMENTALLY FRIENDLY TREATMENT TECHNOLOGY TO CREATE RAW MATERIALS

The increasing success of the bioeconomy is creating a problem related to the demand for raw materials. Most of the raw materials that are being supplied come from primary agricultural production, such as starch, sugar and vegetable oils.

Heterogeneous biowaste, such as municipal and/or urban biowaste, sludge from wastewater, industrial waste, waste from agricultural crops, etc. are a challenging source due to their heterogeneous nature.

This biowaste is currently recovered to a limited extent or is used solely in low value applications.

### **Carboxylic acid platform and fibre recovery platform**

The CAFIPLA initiative will develop and optimise an innovative cascading pre-treatment process that turns these biowaste flows into high quality intermediate products for biological-based industry. The treatment technology is economically feasible and environmentally friendly.

It will use two conversion platforms: the carboxylic acid platform (CAP) and the fibre recovery platform (FRP).

## 2.5 PRESS RELEASE NO. 5

<b>Press release No. 5</b>	<b>Study proves: Pasta waste is a very good substrate for lactic acid production</b>
Date	28.10.2022
Publisher	ATB
Online Access	<a href="https://cafipla.eu/wp-content/uploads/2023/01/PM_5_Pasta.pdf">https://cafipla.eu/wp-content/uploads/2023/01/PM_5_Pasta.pdf</a>

STUDY PROVES: PASTA WASTE IS A VERY GOOD SUBSTRATE FOR LACTIC ACID PRODUCTION

**Almost 30% of the food produced globally is lost or wasted at some point along the food supply chain. The recent publication 'Upgrading pasta wastes through lactic acid fermentations' by the Leibniz Institute of Agricultural Engineering and Bioeconomy (ATB) and IDELUX, demonstrates the potential of pasta waste as the substrate to produce lactic acid.**

Waste prevention and recycling are of particular interest to the food industry. In pasta production, some wastes occur, for example, when cleaning the equipment and when switching production to other pasta shapes. Thus, an estimated 23 grams of such pasta wastes per each kilogram of pasta

produced cannot be sold. Together with IDELUX, the ATB looked for recycling possibilities. The potential is great. Extrapolated to the annual global pasta production, about 276 kilotonnes of pasta waste is waiting for its alternative utilisation.

"The homogeneity of pasta waste and its high starch content provide excellent conditions for both hydrolysis and fermentation and thus for the production of biochemicals such as lactic acid! That was our starting point," says Dr José Pablo López-Gómez, a researcher at the ATB. First, the researchers had to process the pasta waste by means of hydrolysis to release the sugar bound in the starch, because microorganisms are particularly good at metabolising simple sugars like glucose. After hydrolysis, these microorganisms, in the case of the study *Bacillus coagulans* A559, produce the biochemical lactic acid in bioreactors by means of fermentation. The researchers succeeded in optimizing the processes of hydrolysis and fermentation at the laboratory scale and then scaled it to pilot scale (72 litre bioreactor). The knowledge gained about process parameters makes it easier for industry to put the process into practice efficiently and cost-effectively.

"With our study, we have proven that pasta waste is a really good substrate for lactic acid production. At the same time, lactic acid was only a model product. Considering the excellent properties of the pasta waste for fermentations, other biochemical products with even higher value, should also be considered. Ultimately, the goal must be to establish the optimal upgrading routes for such type of wastes," says Dr José Pablo López-Gómez.

The study was conducted as part of the CAFIPLA project, which aims to combine carboxylic acid production and fibre recovery as an innovative, cost-effective and sustainable pre-treatment process for heterogeneous bio-waste. CAFIPLA receives funding from the Bio-based Industries Joint Undertaking (JU) under the European Union's Horizon 2020 research and innovation programme under grant agreement No 887115. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Bio-based Industries Consortium.

## 2.6 PRESS RELEASE NO. 6

<b>Press release No. 6</b>	<b>One man's trash is another man's treasure: Pilot plant for conversion of biowaste into bioproducts successfully launched in Belgium</b>
Date	22.11.2022
Publisher	DECHEMA
Online Access	<a href="https://cafipla.eu/wp-content/uploads/2023/01/PM_6_Pilot_final-1.pdf">https://cafipla.eu/wp-content/uploads/2023/01/PM_6_Pilot_final-1.pdf</a>

### ONE MAN'S TRASH IS ANOTHER MAN'S TREASURE: PILOT PLANT FOR CONVERSION OF BIOWASTE INTO BIOPRODUCTS SUCCESSFULLY LAUNCHED IN BELGIUM

**The CAFIPLA consortium has been working for more than two years to find a way of converting biowaste into valuable products for the biobased industry. This week, a first batch of biowaste was successfully processed by the CAFIPLA pilot plant, the "LOOP", in Tenneville, Belgium – a significant milestone for all project partners. In the coming six months the pilot will be used to gather all data required for further expansion to industrial scale.**

While the idea of using organic waste as abundant, renewable resource for bioproduction is not entirely new, the CAFIPLA approach is the first of its kind to combine a carboxylic acid platform (CAP) for the conversion of easily degradable biomass with a fibre recovery platform (FRP) for the valorisation of fibrous biomass. As a consequence, a broad spectrum of economically relevant bioproducts can be generated from mixed biowaste.

The project partners just accomplished the installation of the CAFIPLA pilot plant, called the “LOOP”, at the municipal biowaste treatment facility of IDELUX Environnement in Tenneville (Belgium) and successfully processed its first batch of biowaste.

This week, the 6th General Assembly of the whole CAFIPLA consortium is taking place in Belgium in order to visit the pilot and discuss the work planned for the final project period. In these upcoming months, the LOOP will convert separately collected municipal bio-waste together with locally available co-substrates to evaluate the combined performance of the two platforms CAP and FRP. First product samples from both platforms will be sent to the CAFIPLA partners for in-depth analysis and validation regarding their application potential.

With a technology readiness level of 5, the LOOP was designed to handle 10 tonnes of biowaste per year, reaching carboxylic acid and fibre yields of more than 80%. For the first half-year trial period, the CAFIPLA team aims at producing at least 250 kg of each – carboxylic acids and fibres.

In the CAFIPLA project, 12 partners from across Europe, including six SMEs, are taking up the challenge of developing a new integrated platform for the economic conversion of biowaste into higher value products. They are supported by research institutes, universities, and large industrial companies. Target products include polyhydroxyalkanoates (PHA) which can be used as biobased and biodegradable plastics or bio-composites, medium chain carboxylic acid (MCCA)-based biooils to be used as antimicrobial feed additives as well as microbial proteins serving as slow-release fertilizers or food and feed additives. The simultaneously produced reinforced natural fibres have high environmental benefits and are relevant for the insulation and construction market segments.

## 2.7 PRESS RELEASE NO. 7

<b>Press release No. 7</b>	<b>Final market report highlights the role of biowaste as essential resource for a growing circular bio-based economy</b>
Date	08.02.2023
Publisher	DECHEMA
Online Access	<a href="https://cafipla.eu/wp-content/uploads/2023/03/PM_7_Final_market_report.pdf">https://cafipla.eu/wp-content/uploads/2023/03/PM_7_Final_market_report.pdf</a>

FINAL MARKET REPORT HIGHLIGHTS THE ROLE OF BIOWASTE AS ESSENTIAL RESOURCE FOR A GROWING CIRULAR BIO-BASED ECONOMY

**The market assessment details the high relevance and impact of biowaste-derived materials in an expanding bioeconomy and demonstrates how novel value chains and markets are created from biowaste by the CAFIPLA project. The CAFIPLA technology presents a radically new approach to**

**biowaste pretreatment via two integrated platforms to achieve maximum valorisation into bioproducts and consequent creation of new bioeconomic value chains.**

Current climate scenarios risk an over reliance on biomass which results in a predicted biomass gap of 40-70% by 2050. In an expanding bioeconomy, demand, and competition for biomass as a feedstock will increase, making the efficient utilisation of biowaste, an abundant but currently underused resource, become increasingly important. The European Commission assesses in their recent Bioeconomy Strategy Progress Report how their currently ongoing pilot actions are focused on developing urban circular bioeconomy concepts “[...] for the production of safe, sustainable and valuable bio-based products from urban biowaste and wastewater.”

While the idea of using organic waste as renewable resource for bioproduction is not entirely new, the CAFIPLA approach is the first of its kind to integrate a carboxylic acid platform (CAP) for the conversion of easily degradable biomass with a fibre recovery platform (FRP) for the valorisation of fibrous biomass. The market report highlights the potential of the two platform products to serve as starting point for multiple valorisation routes leading to a broad spectrum of bioproducts. Selected CAFIPLA end products are showcased including information regarding production processes, product properties and targeted market applications. The CAFIPLA products include polyhydroxyalkanoates (PHA) which can be used as biobased and biodegradable plastics or bio-composites, medium chain carboxylic acid (MCCA)-based biooils to be used as antimicrobial feed additives as well as microbial proteins serving as slow-release fertilisers or food and feed additives. The simultaneously produced reinforced natural fibres have high environmental benefits and are relevant for the insulation and construction market segments.

Recently, the CAFIPLA pilot plant – the “LOOP” – was successfully installed at the intermunicipal biowaste treatment facility of IDELUX Environnement in Belgium and demonstrates the upscaling potential of the CAFIPLA process with a technology readiness level (TRL) of 5. Currently, the first half-year trial period is in full swing to provide the platform products that are being send to the CAFIPLA partners for subsequent valorisation into the relevant biowaste-based end products.

The full report is available here: [LINK](#)

In the CAFIPLA project, 12 partners from across Europe, including six SMEs, are taking up the challenge of developing a new integrated platform for the economic conversion of biowaste into higher value products. They are supported by research institutes, universities, and industrial companies. As one of the project partners, DECHEMA, a non-profit professional society and the expert network for chemical engineering and biotechnology in Germany, developed the present market assessment, which is available for free on the CAFIPLA website.

## 2.8 PRESS RELEASE NO. 8

<b>Press release No. 8</b>	<b>New guideline: Unlocking the potential of biowaste as a resource of the circular European bioeconomy</b>
Date	18.04.2023
Publisher	DECHEMA
Online Access	<a href="https://cafipla.eu/wp-content/uploads/2023/04/PM_8_Guideline.pdf">https://cafipla.eu/wp-content/uploads/2023/04/PM_8_Guideline.pdf</a>

## NEW GUIDELINE: UNLOCKING THE POTENTIAL OF BIOWASTE AS A RESOURCE OF THE CIRCULAR EUROPEAN BIOECONOMY

**The CAFIPLA implementation guideline offers a comprehensive resource for stakeholders interested in successfully integrating biowaste recycling strategies for the creation of novel bioeconomic value chains. The guideline provides valuable insights into the CAFIPLA technology and highlights key factors to establish novel routes for biowaste valorisation on a regional level. The highly flexible CAFIPLA concept offers an innovative and economic alternative to existing technologies for biowaste utilisation, offers multiple implementation options and can thus be tailored to local requirements. Further upscaling of the concept and its transfer to future biowaste valorisation sites will be key to help unlock biowaste as a raw material for the European circular bioeconomy.**

The growing demand for biomass to feed the production of biochemicals, bioenergy and biobased materials entails the potential for conflicts regarding e.g., its optimal use or sufficient supply. Biowaste will become increasingly relevant as abundant and sustainable bioresource to ease trade-offs between industrial and environmental interests and the competition for increasingly scarce bioresources.

The CAFIPLA technology offers an innovative, future-oriented, and economic solution for biowaste utilisation via an integrated biowaste valorisation strategy that combines a Carboxylic acid platform and a Fibre recovery platform to obtain industrially relevant platform products: (1) Specific spectra of carboxylic acids feed into the bioproduction of microbial protein, bioplastics or bio-oils while (2) recovered fibres are manufactured into biobased materials for packaging, insulation and construction applications. The CAFIPLA platforms are highly adaptable and can be tailored to specific local requirements by customising the value chains to go hand in hand with given feedstock supplies, stakeholders and markets. Different implementation routes, including an integration into existing biorefinery or waste treatment sites to complement existing biowaste utilisation approaches or the installation of stand-alone CAFIPLA biorefineries, additionally increase the technology's application potential.

The newly released "CAFIPLA Guideline for Successful Integration of the Technology Platform" outlines opportunities and challenges that must be considered in moving towards implementation of the concept. The requirements of the CAFIPLA technology are evaluated, considering supply chains and technical feasibility and highlighting the economic added value of the diverse biowaste-based end product portfolio. Based on an overarching PESTEL analysis clear recommendations are provided to accelerate biowaste valorisation and the circular transition. With roughly 20,000 biogas plants in Europe<sup>1</sup> and an estimated potential of 17 million tonnes of biowaste available for anaerobic digestion<sup>2</sup>, the extensive implementation potential of the CAFIPLA technology is evident. Next steps must address the scale up of the technology to unlock biowaste as a raw material for bioeconomic value chains.

In the CAFIPLA project, 12 partners from across Europe, including six SMEs, are taking up the challenge of developing a new integrated platform for the economic conversion of biowaste into higher value products. They are supported by research institutes, universities, and industrial companies. As one of the project partners, DECHEMA, a non-profit professional society and the expert network for chemical engineering and biotechnology in Germany, developed the present CAFIPLA Guideline, which is available for free on the CAFIPLA website.

## 2.9 PRESS RELEASE NO. 9

<b>Press release No. 9</b>	<b>Urban Circular Bioeconomy Conference: CAFIPLA project organises stakeholder event and presents final results</b>
Date	31.05.2023
Publisher	DECHEMA
Online Access	<a href="https://cafipla.eu/wp-content/uploads/2023/05/PM_9_Final_conference.pdf">https://cafipla.eu/wp-content/uploads/2023/05/PM_9_Final_conference.pdf</a>

### URBAN CIRCULAR BIOECONOMY CONFERENCE: CAFIPLA PROJECT ORGANISES STAKEHOLDER EVENT AND PRESENTS FINAL RESULTS

**After 3 productive years, the CAFIPLA project comes to a successful end. At the final Urban Circular Bioeconomy Conference, the project partners presented findings of the final months and the trial phase of the CAFIPLA pilot plant. The CAFIPLA technology provides an alternative concept to biowaste valorisation and scaled up the process to TRL5. Joined by expert speakers from the City Council and European projects such as Tech4Biowaste and the HOOP network, the participants discussed state-of-the-art approaches and needs to be addressed in the future for accelerating implementation of the urban circular bioeconomy.**

On 10 May 2023, the final CAFIPLA Conference "Urban Circular Bioeconomy" was held at the Europa Congress Palace in Vitoria-Gasteiz in North Spain. The event was an opportunity to discuss new findings, different approaches and current challenges of biowaste upcycling. Expert speakers from industry and research shared their perspectives on biowaste utilisation: Joseba Sánchez, representant of the City Council of Vitoria, opened talks by presenting the city's organic waste management infrastructure and recycling goals. Susann Günther from DBFZ, the German Biomass Research Center, showcased the European Biomass Atlas developed during the CAFIPLA project to map and monitor biogenic resource potentials across Europe and Stef Denayer introduced the Tech4Biowaste database of technologies and technology providers for valorising biogenic residues. Following, Esther Hegel from DECHEMA emphasised the future importance of biowaste as a resource in her talk on the "Impact and markets of biowaste-derived materials" and an impressive example for this was then given by Ana Carolas from Biotrend who manufacture high quality biowaste-based polymer films and materials.

With this conference, the CAFIPLA project celebrated its successful completion after 3 years. During the course of the project, the TRL5 pilot plant was assembled and put into operation to process mixed biowaste to obtain a total of 250 kg of the valuable CAFIPLA platform products: carboxylic acids and fibres. Through a multichannel dissemination approach resulting e.g., in articles, radio interviews, podcasts, webinars and workshops as well as conference participations, the CAFIPLA partners not only promoted the scientific relevance of biowaste upcycling but brought the topic also to the public attention to help improve public awareness and encourage participation.

Thanks to all participants for their inspiring contributions and to the city of Vitoria for the support and insights on local urban circular bioeconomy projects. The Conference recordings are available [online](#) and the Proceedings can be downloaded [here](#).

In the CAFIPLA project, 12 partners from across Europe, including six SMEs, are taking up the challenge of developing a new integrated platform for the economic conversion of biowaste into higher value products. They are supported by research institutes, universities, and industrial companies. The CAFIPLA Conference was organised by CAFIPLA partner TECNALIA Research & Innovation, the largest

center of applied research and technological development in Spain. All communication materials and public project outcomes are available on the CAFIPLA [website](#).

### 3 REACH OF CAFIPLA PRESS RELEASES

CAFIPLA has published 9 press releases with No. 9 being released only by end of May 2023. Press releases are an efficient instrument to reach a high number of people and what is more important, multipliers interested in the field of bioeconomy who additionally help promoting the project. The statistics listed in Table 1 are shown as an example of the general reach of press release. Data is provided by idw (German scientific information service) and shows the number of persons reached via this service. Evaluation of the idw data shows that with each published press release about 5317-7533 people were reached. Since the CAFIPLA press releases rather represents high scientific level, the achieved reach is very impressive. It can be assumed that the technology of the CAFIPLA project was accordingly communicated to a wide attracts more attention in any case.

**Table 1:** Information on the achieved reach of press releases published within the CAFIPLA project.

Press release	Date	Persons reached	Link
No. 1: CAFIPLA project start (German)	09.07.2020	6.729	<a href="https://www.idwonline.news/2020/07/09/cafipla-das-eu-projektzur-entwicklung-einer-integrierten-strategie-zurvalorisierung-von-biomasse/">https://www.idwonline.news/2020/07/09/cafipla-das-eu-projektzur-entwicklung-einer-integrierten-strategie-zurvalorisierung-von-biomasse/</a>
No. 1: CAFIPLA project start (EN)	09.07.2020	5.317	<a href="https://idw-online.de/en/news750851">https://idw-online.de/en/news750851</a>
No. 2: Market analysis (EN)	01.09.2021	5.791	<a href="https://idw-online.de/de/news774971">https://idw-online.de/de/news774971</a>
No. 2: Market analysis (GE)	01.09.2021	7.533	<a href="https://idwonline.de/de/news?print=1&amp;id=774969">https://idwonline.de/de/news?print=1&amp;id=774969</a>
No. 6: Pilot plant for conversion of biowaste into bioproducts successfully launched in Belgium	29.11.2022	6.579	<a href="https://idw-online.de/de/news805652">https://idw-online.de/de/news805652</a>
No. 7: Market Report: Role of biowaste as essential resource for a growing circular biobased economy	27.03.2023	5.767	<a href="https://idw-online.de/de/news809890">https://idw-online.de/de/news809890</a>
No. 8: Unlocking the potential of biowaste as a resource of the circular European bioeconomy – A new Guideline	20.04.2023	5.670	<a href="https://idw-online.de/de/news812925">https://idw-online.de/de/news812925</a>



## 4 CONCLUSION

The CAFIPLA press releases are an important part of the projects' dissemination and communication strategy, as they draw more attention to the project's milestones and achievements. On the one hand, they enable important advances, discoveries or publications in biotechnology to be made accessible to a wider audience. This increases awareness of the project and arouses the interest of potential investors, partners and the public. In addition, press releases offer the opportunity to obtain expert opinions and validation for the project. As the press releases are taken up by other media, scientific journalists and industry experts can become aware of the project and underline the relevance of the news, which contributes to credibility and reputation (Figure 2). Thereby, findings and results from the project are made available and accessible to a wider community and the project topic gains greater reach to advance and improve public awareness and knowledge.

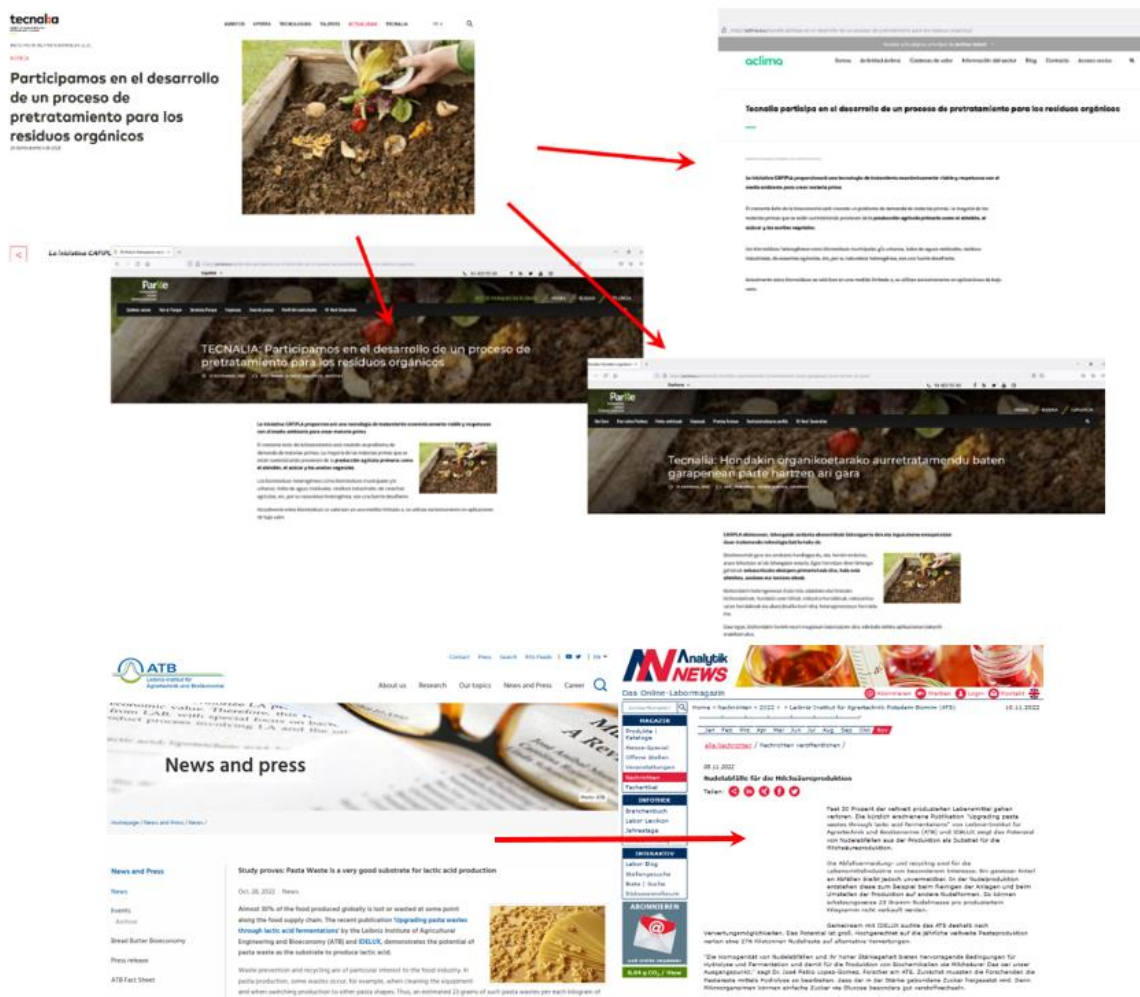


Figure 2: Dissemination of CAFIPLA press releases No. 3 and No. 5 via other sides and channels.

So far, a total of 9 press releases have been published as part of the CAFIPLA project, some of which reached approximately 6000 readers (Figure 3). In addition, the press releases are available online and will continue to inform interested stakeholders. By this, the project achievements are depicted in another long-lasting form of informational material beside scientific publications, which help to raise awareness for biowaste recycling, draw stakeholders' attention to the potential of the CAFIPLA technology and attract potential future customers of the CAFIPLA products.

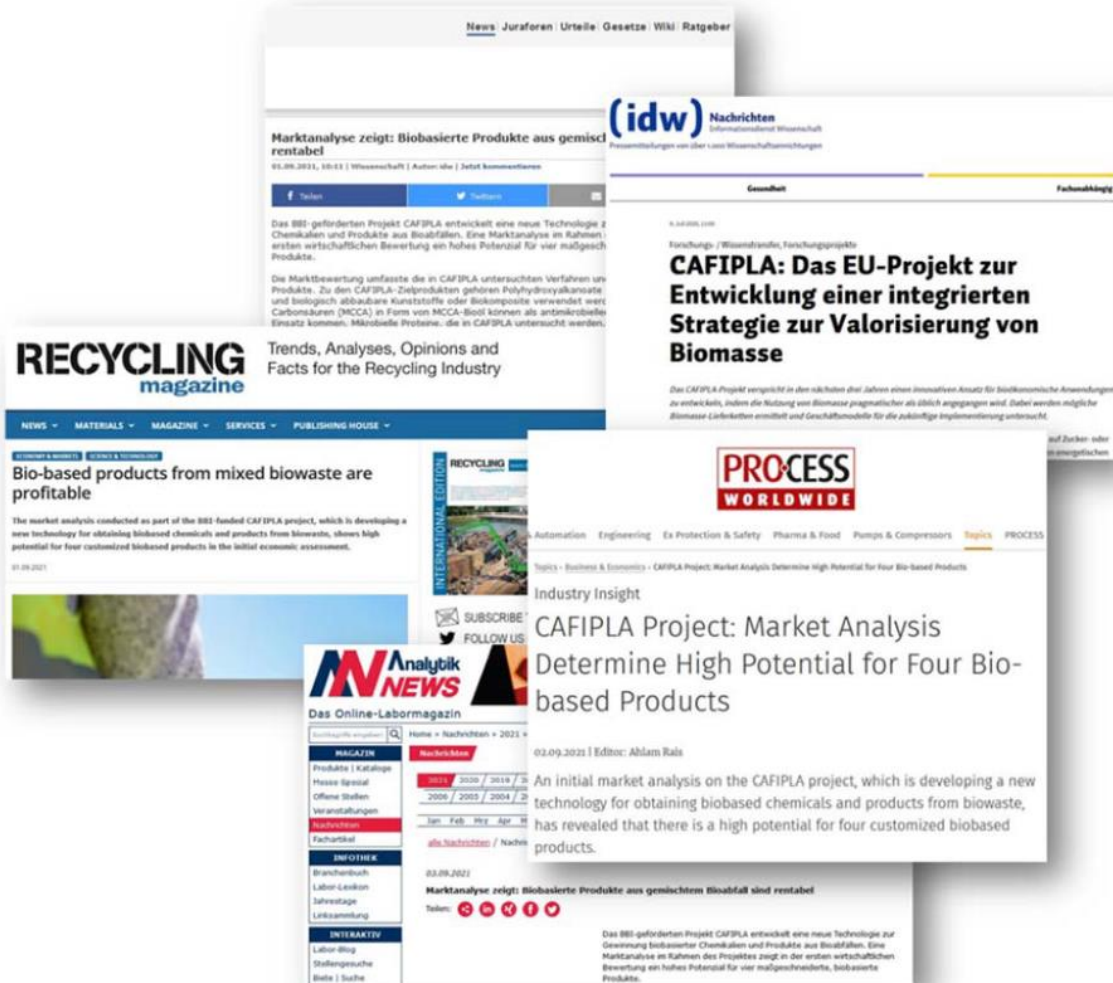


Figure 3: Example for uptake of CAFIPLA press release No. 2 by other media.