Bio-based Industries Research and Innovation action

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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

D7.11 Project webinars including recordings

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RESPONSIBLE FOR THIS DELIVERABLE	Christina Andreeßen, DEC
AUTHOR	Christina Andreeßen, DEC
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DISCLAIMER

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.

Please refer to this deliverable as:
CAFIPLA – D7.11 (2023), Deliverable D7.11 Project podcast, January 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 "D7.11 Project webinars including recordings" summarises the webinars that were planned, organised and held 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 these stakeholder groups about the value-added biowaste-based CAFIPLA products and their further applications.

The topics, focus and materials as well as reports of the events and subsequent communication actions of the four webinars are presented in further detail. To maximise the dissemination outcome, webinars 2 to 4 are available as recordings on the CAFIPLA website[1].

[1] https://cafipla.eu/home_cafipla/ongoing/publication-and-media/

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ABBREVATIONS

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 Gemeinnutzige 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 "D7.11 Project webinars including recordings" of the CAFIPLA project is part of WP7: Dissemination, communication, and exploitation (Task 7.2 Dissemination) and summarises the webinars that were planned, organised and held 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 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 webinars were planned as part of the project's Plan for Dissemination & Exploitation of Results[2].

[2] CAFIPLA – D7.6 (2022), Deliverable D7.6 Updated Plan for Dissemination & Exploitation of Results (PDER v2), October 2022.

2 WEBINARS

2.1 WEBINAR 1

Webinar 1	CAFIPLA Project introduction: „Combining carboxylic acid production and fibre recovery as an innovative, cost effective and sustainable pretreatment for heterogeneous biowaste”
Date	18.05.2021, 5:00 pm
Speaker	Karoline Wowra
ORGANISER	DECHEMA
Participants	60
Target group	International students (Biotechnology engineering)
Recordings	Not available

The first CAFIPLA webinar was held as a guest lecture in the “Biotechnological Engineering” programme at the Technical University Darmstadt by Karoline Wowra from DECHEMA (Figure 1). To reach a broader target group, (the project was introduced to 60 international students, mainly from Morocco and Ivory coast. The half-hour webinar presented general project facts, the CAFIPLA concept and objectives and explained the methodology and process flow. Furthermore, the tasks and work packages, DECHEMA is involved in were described in detail: The initial market assessment was summarised, the Life cycle assessment approach was introduced, and dissemination, communication and exploitation contents were highlighted.

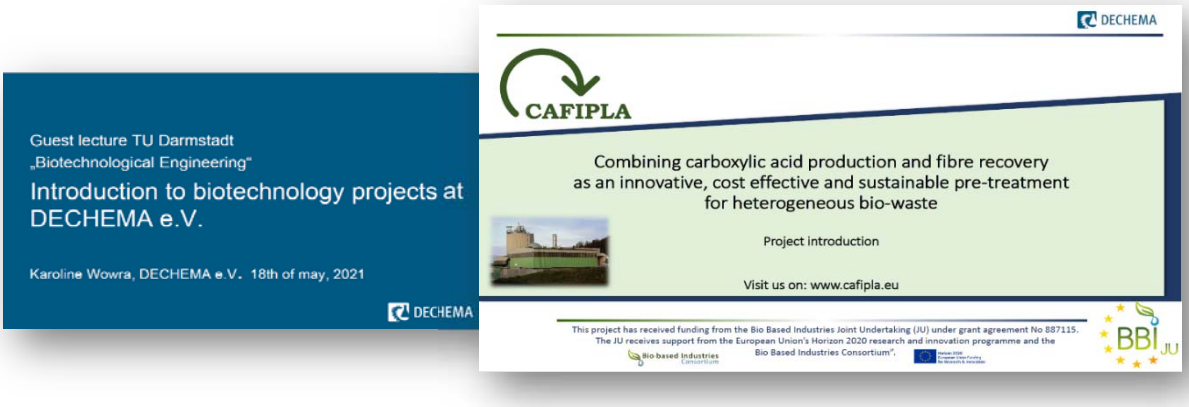

Figure 1: First CAFIPLA webinar introducing the project at TU Darmstadt in May 2021.

2.2 WEBINAR 2

Webinar 2	From organic waste to biochemicals – Part 1: How to pre-treat biomass
Date	10.12.2021, 3:00-4:15 pm CET
Speaker	TECNALIA, IDELUX Environment, OWS RF TECNALIA, DBFZ
Organiser	DECHEMA
Guest	PERSEO Biotechnology
Participants	66
Target group	Biowaste users, producers, Biorefinery plant operators
Recordings	Available on CAFIPLA website via Youtube[3]

In 2021, the CAFIPLA consortium planned and organised the webinar series "From organic waste to biochemicals" with two events to attract a targeted audience with the specialised focus topics. Part 1 "How to pretreat biomass" put the upstream part of the CAFIPLA value chain into the spotlight, comprising an overview of the CAFIPLA process followed by expert project partners presenting about the pragmatic biomass pretreatment approach, advantages for plant operators to implement such biowaste valorisation and relevant facts and findings with regard to different feedstocks. As a highlight, the CAFIPLA consortium invited the BBI JU project URBIOFIN to present their biowaste valorisation approach and join the general discussion with the audience at the end of the webinar.

The event was listed on the CAFIPLA EVENTS page[4] and additional advertisement material (Figure 2) was prepared and distributed via CAFIPLA social media, the partners' networks, the URBIOFIN newsletter, through the CBE JU communication channels and via DECHEMA newsletters.

[3] https://cafipla.eu/home_cafipla/ongoing/publication-and-media/
[4] https://cafipla.eu/home_cafipla/ongoing/events/

Figure 2: Advertisement material (Save-the-date and Agenda) about CAFIPLA webinar 2.

Webinar 2 was held on Friday, 10 December 2021 from 3:00 to approximately 4:15 pm CET and attracted around 66 participants. First, the CAFIPLA partners TECNALIA, IDELUX Environnement, OWS Research Foundation and DBFZ introduced the overall CAFIPLA concept and technologies to the audience and presented how the CAFIPLA project will help create new biobased value chains based on biomass, specifically organic waste (Figure 3).

Figure 3: Joint presentation by the partners TEC, IDE, OWS RF and DBFZ for CAFIPLA webinar 2

To start, Marie-Aline Pierrard presented a video tour to take the audience to the plant and show step-by-step how municipal biowaste is currently treated at IDELUX and what are the benefits of setting up the CAFIPLA pre-treatment platforms to create value-added products. Jef van de Poel from OWS RF and Thomas Dietrich from TECNALIA then went into the detail of these technologies: the Carboxylic Acid Platform (CAP) and the Fibre Recovery Platform (FRP). Following, Susann Günther from DBFZ presented results from the feedstock screening to evaluate the availability of applicable biomass around the pilot plant. Finally, Marcos Latorre from PERSEO Biotechnology gave an introduction and insights about the URBIOFIN[5] project that aims on demonstrating the viability of an integrated biorefinery to transform organic municipal solid waste into value added bioproducts.

The webinar recordings were made available via the CAFIPLA website under PUBLICATION AND MEDIA (Figure 4) and advertised via the NEWS page[6] and via a Newsletter article (Figure 5).

Figure 4: Recordings of webinar 2 on the CAFIPLA website.

Figure 5: Recap and advertisement of recordings via Newsletter and website for CAFIPLA webinar 2.

[5] https://www.urbiofin.eu/
[6] https://cafipla.eu/home_cafipla/ongoing/news/

2.3 WEBINAR 3

Webinar 3	From organic waste to biochemicals – Part 2: How to valorise biowaste
Date	17.03.2022, 3:00-4:15 pm CET
Speaker	TECNALIA, ATB, UGent, AVECOM, FRD, DECHEMA
Organiser	DECHEMA
Participants	48
Target group	Biowaste processors, Industry/Producers, Participants of the first webinar
Recordings	Available on CAFIPLA website via Youtube[7]

he second part of the webinar series "From organic waste to chemicals" took place in March 2022. Part 2 "How to valorise biowaste" put the focus now on the downstream CAFIPLA value chain, including the recovery of lactic acid (LA) as an intermediate from biowaste, details about the individual CAFIPLA end products and benefits of the production processes as well as insights on the market assessment of the CAFIPLA products. The date and agenda were also listed on the CAFIPLA EVENTS page[8] and additionally advertised via CAFIPLA social media, the partners' networks, through the CBE JU communication channels and via DECHEMA newsletters and social media (Figure 6).

Figure 6: Advertisement material (Save-the-date and Agenda) about CAFIPLA webinar 3

Webinar 3 was held on 17 March 2022, again starting at 3:00 and until 4:30 pm CET and was joined by 48 participants while speakers for Part 2 "How to valorise biowaste" were the CAFIPLA partners ATB, University of Ghent, Avecom, Biotrend, FRD and DECHEMA (Figure 7). After a short recap on Part 1 of the webinar series and an overall introduction to our CAFIPLA project from Thomas Dietrich (TECNALIA), Joachim Venus (ATB) explained the production of lactic acid from biowaste, which serves as an intermediate for further applications.

[7] https://cafipla.eu/home_cafipla/ongoing/publication-and-media/
[8] https://cafipla.eu/home_cafipla/ongoing/events/

In the following, Kevin Sabbe (University of Ghent) presented how medium-chain carboxylic acids (MCCA) and mainly caproic acid are produced from lactic acid rich biowaste. Ana Carolas (Biotrend) then presented how biopolyesters (PHA) are produced from waste-derived carboxylic acids and Nele Driesen (Avecom) showed the route for producing microbial protein from waste-derived carboxylic acids. Both presented the versatile applications and advantages of PHA and Microbial protein.

Figure 7: Joint presentation by TEC, ATB, UGent, AVE, FRD and DEC for CAFIPLA webinar 3.

Laurent Bleuze (FRD) explained the production route of the CAFIPLA fibre recovery platform for the derivatisation of reinforced fibres and showed how these are extracted from biowaste and which applications are of main interest. Lastly, to examine the economic side of the CAFIPLA concept, Karoline Wowra (DECHEMA) presented results of the CAFIPLA Market assessment, which evaluated the four products based on application areas, potential markets, production volumes and annual sales, as well as regarding the respective framework conditions. The webinar ended with an interesting discussion with all partners and the audience.

The webinar recordings were made available via the CAFIPLA website under PUBLICATION AND MEDIA (Figure 8) and advertised via the NEWS page[9] and with LinkedIn postings (Figure 9).

[9] https://cafipla.eu/home_cafipla/ongoing/news/

Figure 8: Recordings of webinar 3 on the CAFIPLA website

Figure 9: Recap and advertisement of recordings via LinkedIn and website for CAFIPLA webinar 3

2.4 WEBINAR 4

Webinar 4	Neue Wertschöpfungsketten aus Biogasanlagen New value chains from biogas plants (in German)
Date	05.12.2022, 2:00-3:00 pm CET
Speakers	TECNALIA, DBFZ, UFZ, THM Giessen, DECHEMA
Organiser	DECHEMA
Participants	36
Target group	Academia, Biogas plant operators, Waste management industry (Germany)
Recordings	Available on CAFIPLA website[10] and via BioBall homepage[11]

The fourth webinar was jointly organised by CAFIPLA and the German Innovation space "BioBall" [12], which aims at driving the structural change towards a sustainable, bio-based economy in Metropolitan areas, such as Frankfurt-Rhine-Main. The webinar "New value chains from biogas plants" took place on 5 December 2022 and was held in German targeting the local Academia and Waste management industry. The date and agenda were listed on the CAFIPLA EVENTS page[13] and advertised via CAFIPLA social media, the BioBall network and via DECHEMA channels (Figure 10).

Figure 10: Advertisement material (Save-the-date and Agenda) about CAFIPLA webinar 4

[10] https://cafipla.eu/home_cafipla/ongoing/publication-and-media/
[11] https://biooekonomie-metropolregion.de/bioball/de/ongoing_topics_de/publications_de.html#_publications_webinars_de
[12] https://biooekonomie-metropolregion.de/bioball/en/home_en.html
[13] https://cafipla.eu/home_cafipla/ongoing/events/

The webinar gave an overview of new biowaste valorisation approaches to answer the question: Is there more to it than biogas and fertilizer? As pressure is growing on EEG-subsidized biogas plants to become profitable in the long term, new value creation beyond gas and fertiliser must therefore be considered. Four expert speakers from TECNALIA, DBFZ & UFZ, THM Giessen and DECHEMA reported on the latest advances in the field of biogas plant valorisation approaches:

- TECNALIA: CAFIPLA – Combining carboxylic acid production and fibre recovery as an innovative, cost-effective and sustainable pre-treatment process for heterogeneous biowaste.
- DBFZ&UFZ: A production process for medium-chain fatty acids from biomass to be integrated into conventional biogas plants
- THM Giessen: The utilisation of terpenes from the gas stream of waste-based biogas plants
- DECHEMA: The new FNR project BiogasanlagePLUS analyses biotechnological approaches to utilise CO_2 from biogas plants

The CAFIPLA project was presented by Thomas Dietrich as one of these novel valorisation approaches with the focus on carboxylic acids and fibres (Figure 11). New project ideas for BioBall were presented by Maria Braune (DBFZ) for the extraction of medium-chain fatty acids and by Dirk Holtmann (THM Giessen), who aims at isolating terpenes. Finally, the recently started FNR project BiogasanlagePLUS, where they are looking into new ways to utilise CO_2, was introduced by Esther Hegel (DECHEMA).

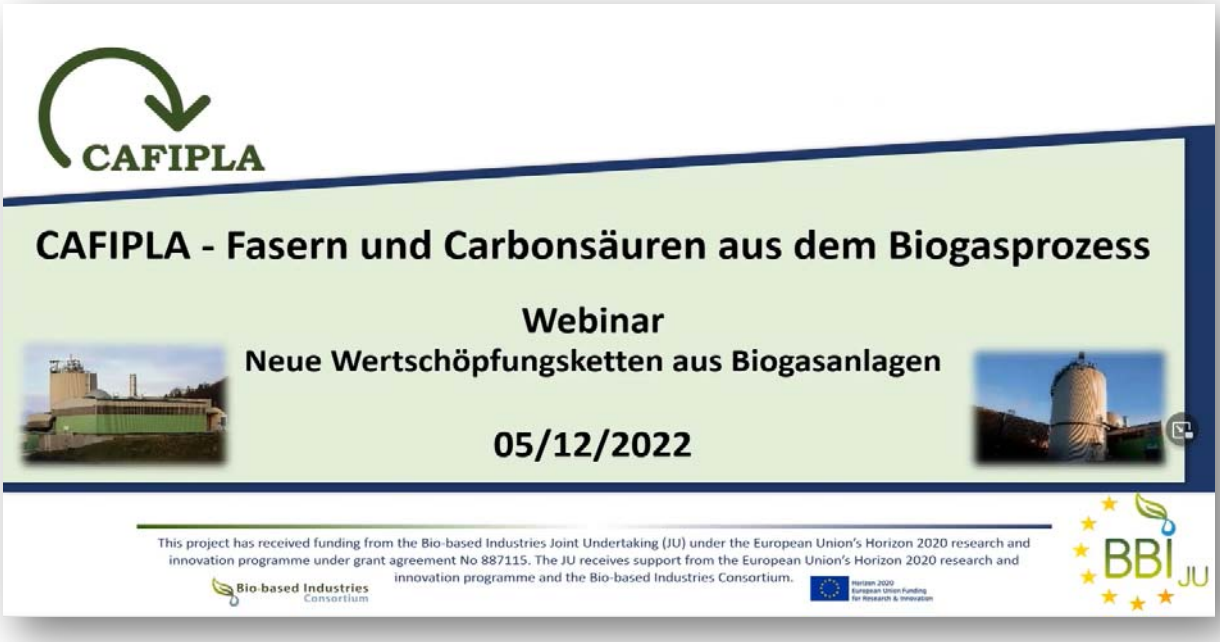

Figure 11: Presentation by TEC for CAFIPLA webinar 4.

The webinar recordings were made available via the CAFIPLA website under PUBLICATION AND MEDIA (Figure 12) and advertised via the NEWS page[14] (Figure 13).

Figure 12: Recordings of webinar 4 on the CAFIPLA website.

Figure 13: Recap and advertisement of recordings via website for CAFIPLA webinar 4

[14] https://cafipla.eu/home_cafipla/ongoing/news/

3 CONCLUSION

The CAFIPLA webinars added an important dimension to the project's dissemination and communication strategy as they facilitated the direct exchange and interaction with a broad range of relevant stakeholders ranging from Academia to industry and including policy makers, other BBI JU projects, BIC and BBI consortia members, biowaste processors, producers, and biogas plant owners.

The four webinars reached over 200 participants in the first instance and many more have accessed the recordings, which are available for webinars 2-4 via the CAFIPLA website (PUBLICATIONS AND MEDIA section). The bidirectional discussions between the audience and speakers that were following the webinar presentations contributed to raise awareness for the valorisation of biowaste, engage stakeholders about the potential of the CAFIPLA technology as well as attract potential future customers of technology and products.