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BIO-MeGaFuel

Bio Methanol Production via Chemical Looping Gasification Coupled with Membrane Reactors

HORIZON EUROPE GRANT AGREEMENT NUMBER: 101147737

Start date of project: 01/09/2024

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WP5 – Exploitation, Dissemination and Communication

D5.10 Dissemination activities 1

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WP5
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Activities 1

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1. Executive summary

1.1. Description of the deliverable content and purpose

This document presents the updated of dissemination activities for the Bio-MeGaFuel project up to Month 18.

As outlined in the deliverable D5.9, Dissemination and Communication plan update, the dissemination and communication framework are embedded within WP5, which ensures a coordinated and results-driven approach across the consortium. The strategy is designed not only to raise awareness of project developments, but also to facilitate uptake of results by key stakeholder groups, including industry actors, research organisations, policymakers and civil society. Particular attention is given to aligning communication efforts with relevant EU policy priorities and sustainability objectives.

Internal communication mechanisms have been reinforced to ensure efficient information flow among partners and Work Packages. Monthly meetings, shared documentation platforms on TEAMS and progress monitoring via WP leaders support coherence in implementation and minimise overlaps or gaps in activities.

On the external dimension, dissemination actions have focused on delivering targeted and audience-appropriate content. Communication outputs include technical publications, international workshops jointly hosted by EU projects with common objectives, digital outreach via the project website and social media channels, as well as participation in sector-specific events and clustering initiatives. These actions contribute to strengthening the project's positioning within the European research and innovation landscape.

Overall, this report documents the progress achieved by Bio-MeGaFuel in dissemination and communication activities up to M18, outlines the instruments applied, and identifies areas for further reinforcement in the upcoming reporting period to maximise long-term impact and sustainability.

1.2. Deviation from objectives

No deviations were observed

2. Dissemination and Communication tools

Ongoing efforts have been made to increase awareness of the project and to communicate its objectives, scope and expected results in a clear and accessible way to relevant stakeholders. Since the start of the project, these actions have been implemented in a consistent and well-coordinated manner and will continue throughout the project period.

All dissemination and communication activities have been carried out in line with the approved Dissemination and Communication Plan, ensuring that the selected messages, tools and channels effectively reach the identified target groups as well as the broader public.

2.1. Project logo & public document templates

A project logo, shown in Figure 1., has been created as visual identity of the project, see deliverable D5.5.



Figure 1 Logo of the Bio-MeGaFuel project

In addition, templates for the general presentations of the project and a public presentation (as shown in Figure 2.) have been done and uploaded on the share folder. All partners could use them for dissemination and communication activities for Bio-MeGaFuel project.

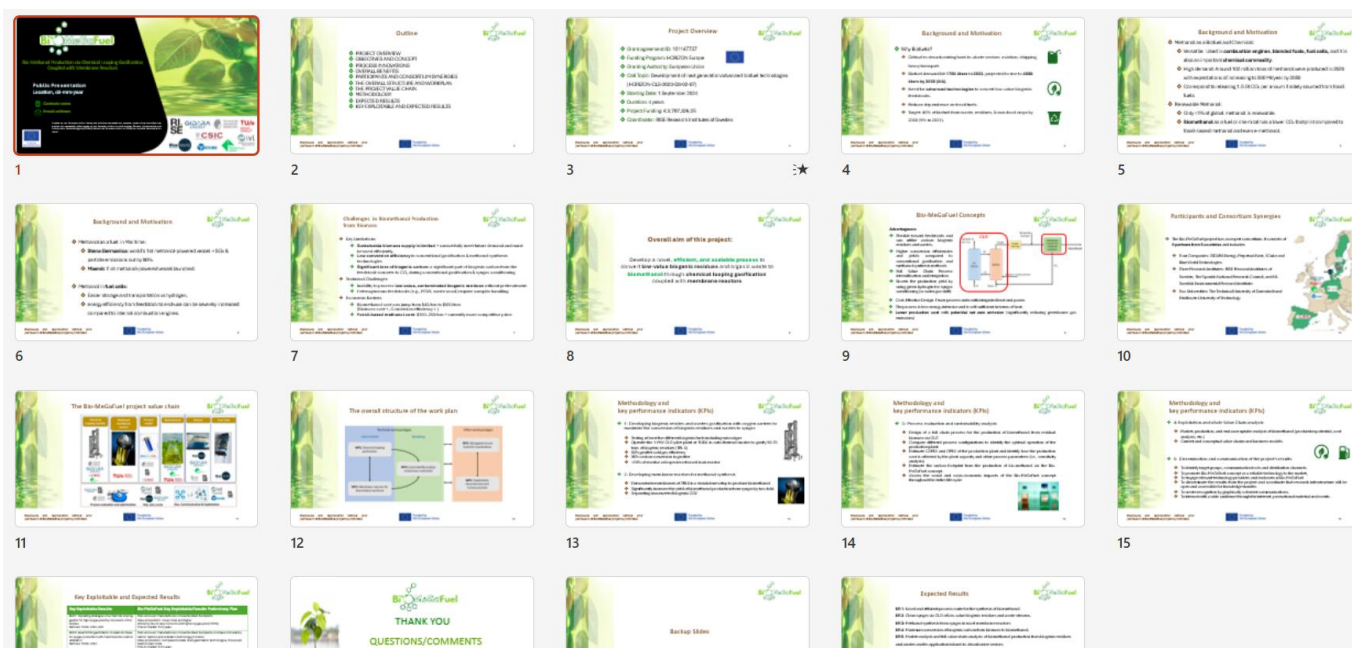


Figure 2 public presentation (ppt) of Bio-MeGaFuel project



2.2. Websites

Bio-MeGaFuel project follows the EU Open Science Policy, operates on the principle of being 'as open as possible, as closed as necessary'. All project data and details are kept in private domain and public website.

2.2.1. Private web space

To support internal collaboration, RISE set-up a shared document repository within the TEAMS environment, specifically designed to streamline access to key resources and improve the control. This centralized storage space hosts templates, guidance documents, administrative forms, and technical documentation that are frequently referenced by partners. Access permissions have been carefully managed by RISE to ensure data security while enabling efficient sharing of information across relevant Work Packages. Notifications and tagging functionalities help keep team members informed of updates and deadlines, promoting timely contributions.

2.2.2. Public web space

The dissemination and communication activities started already at first month of the project with the creation and realization of the website, (<https://www.biomegafuelproject.eu/>), see Deliverable D5.7.

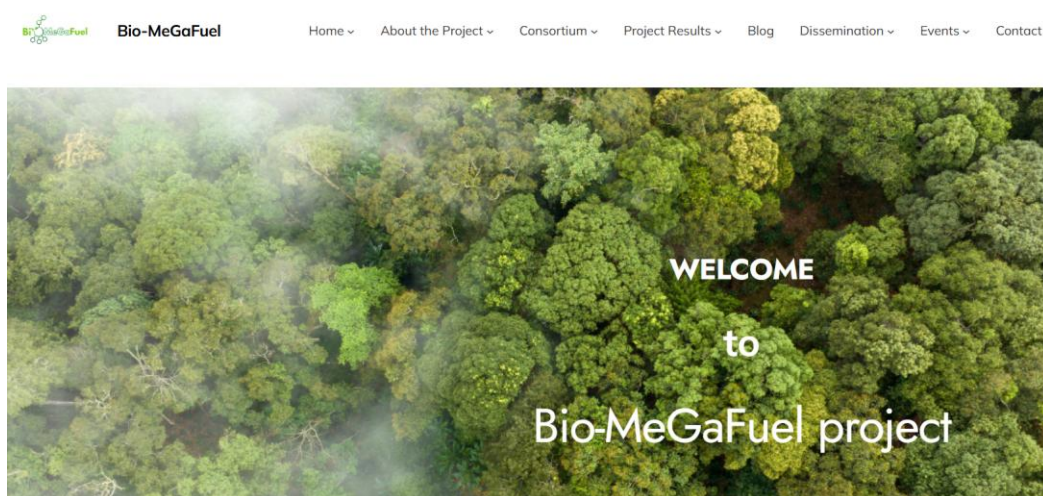


Figure 3 Bio-MeGaFuel project website

Beyond its function as a central source of information, the project website represents a core element of the overall communication strategy, contributing significantly to the project's visibility and public engagement. Developed with a clear structure and user-friendly navigation, the website provides straightforward access to the most updated information on the project's latest activities and achieved results. As shown in Figure 3., the main sections of the website and their respective sub-pages accessible to users are presented below.:

- Home
- About the Project
- Consortium
- Project results
- Blog
- Dissemination
- Events
- Contact us

Each section is organised to deliver relevant content, supported by multimedia content, downloadable resources, and direct access to public deliverables. The homepage features a news feed, allowing visitors to stay informed at a glance.

2.3. Social Media

Social media plays a crucial role in expanding outreach beyond traditional channels, enabling timely dissemination of results and facilitating direct engagement with targeted audiences. LinkedIn serves as the primary platform for these activities, www.linkedin.com/company/bio-megafuel-project, acts as the central channel for sharing updates, announcements and key outcomes (see Figure 4). In addition, the platform allows the consortium to host online events directly via LinkedIn, enabling rapid outreach and the ability to quickly attract public interest. The page has demonstrated consistent growth in terms of visibility and user engagement, reflected in a steadily increasing number of followers (>436 followers).

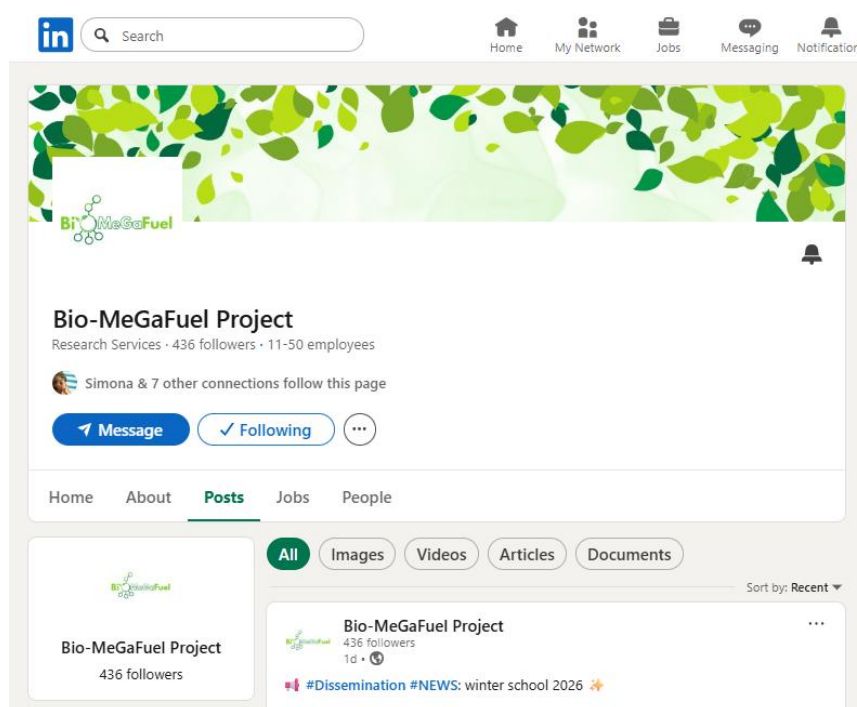


Figure 4 Bio-MeGaFuel project LinkedIn page

In addition to the project's LinkedIn presence, news and highlights are regularly shared via the LinkedIn page (<https://www.linkedin.com/company/1-cube-by>) and the company website of 1CUBE (<https://www.1cube.eu/>), creating further visibility and helping to reach a wider network. This cross-promotion ensures broader engagement and reinforces key messaging across aligned channels. Furthermore, 1CUBE's official website also features dedicated sections for Bio-MeGaFuel and other EU-funded projects, offering a central point for accessing project information and updates. All online communications adhere to the project's visual identity and include the appropriate EU funding statement, ensuring coherence and compliance across platforms.

2.4. Printed materials (Leaflet/ Roll-up/ Posters)

1CUBE has prepared leaflet, roll-up and posters in coordination with the partners to advertise Bio-MeGaFuel in different events, see Figure 6. Periodic leaflets will be released to engage interested stakeholders about project developments and upcoming events. Other printed materials will be custom made per event, while some general materials will be also created and printed that can be used in every dissemination event. For instance, a program booklet containing 2-page profolio of Bio-MeGaFuel was prepared for dissemination during the workshop.

Figure 5. shows the photos of the printed materials being used in different circumstances,

Project Consortium

The Bio-MeGaFuel project has an expert consortium. It consists of **9 partners from 4 countries** and includes:

- **Three Research Institutes:** RISE Research Institute of Sweden, IVL Swedish Environmental Research Institute, and The Spanish National Research Council
- **Two Universities:** The Technical University of Darmstadt and Eindhoven University of Technology
- **Four Companies:** GIDARA Energy, Perpetual Next, ICube and Blue World Technologies

For more information about our Bio-MeGaFuel project...
www.biomegafuelproject.eu

CONTACT US

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- Dissemination Manager: s.scoppe@icube.eu

Bio Methanol Production via Chemical Looping Gasification Coupled with Membrane Reactors

Project number: 101147377
Project acronym: Bio-MeGaFuel
CALL: HORIZON-CL5-2023-D3-02
TOPIC: HORIZON-CL5-2023-D3-02-07
Duration: 48 months
EU FUNDING: € 3,797,326.25
Coordinator: RISE Research Institute of Sweden

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Bio Methanol Production via Chemical Looping Gasification Coupled with Membrane Reactors

Objective

The goal of Bio-MeGaFuel is to establish a novel efficient, and scalable process to convert low-value biogenic residues and non-renewable waste to biomethanol through chemical looping gasification coupled with membrane reactors.

- Developing gasification with oxygen carriers to maximize conversion of biogenic residues and wastes to syngas
- Developing integrated membrane reactors for methanol synthesis with recirculation of unconverted carbon dioxide to maximize conversion of biogenic carbon to product
- Exploitation and analysis of whole value chain from low-value biogenic residues and wastes to biomethanol
- Dissemination and communication of the project's results to pave the way for commercial opportunities.

Work Plan

Biomethanol is not only a valuable chemical commodity but also a renewable fuel. It can be used directly in internal combustion engines, blended with other fuels, or utilized to produce fuel additives that enhance engine performance. However, the strong global demand for methanol in the chemical industry limits its availability in the energy sector. Additionally, conventional methanol production relies primarily on fossil resources, resulting in significant greenhouse gas (CO₂) emissions.

Biomethanol production presents a sustainable alternative for fuel and chemicals, offering significant GHG emission reductions and serving as a promising solution for decarbonizing hard-to-abate sectors. However, its production from sustainably sourced biomass remains challenging due to low process efficiency, high production costs, and the limited availability and expense of high-quality biomass feedstocks.

The Bio-MeGaFuel project addresses these challenges by enhancing production capacity and reducing production costs of biomethanol. This is achieved through:

- **Process Integration**
- **Process Intensification**
- **Synergies with renewable energy sources**
- **Utilization of low-value biogenic residues for biomethanol production**
- **Enhanced conversion efficiency, including improved conversion of biogenic carbon to biomethanol**

Partners:

- RISE Research Institutes of Sweden
- GIDARA Energy
- Technical University of Darmstadt
- Eindhoven University of Technology
- The Spanish National Research Council
- IVL Swedish Environmental Research Institute
- Perpetual Next
- ICUBE
- Blue World Technologies

INTERNATIONAL WORKSHOP ON Sustainable & Circular Technologies
26-27 NOV 2025, EINDHOVEN

Organized by:

ABOUT Bio-MeGaFuel

The initial project objective is to develop a novel efficient and scalable process to convert low-value biogenic residues and non-renewable waste to biomethanol through chemical looping gasification coupled with membrane reactors. The project aims to maximize conversion of biogenic residues and wastes to syngas, develop integrated membrane reactors for methanol synthesis with recirculation of unconverted carbon dioxide, and exploit the whole value chain from low-value biogenic residues and wastes to biomethanol.

CONTACT US

Project Coordinator: amir.soleimani.salim@ri.se
Dissemination Manager: s.scoppe@icube.eu

CONTACT US

Project number: 101147377
Project acronym: Bio-MeGaFuel
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Coordinator: RISE Research Institute of Sweden



Figure 5 Bio-MeGaFuel printed materials (in clockwise) leaflet, poster, roll-up and project profolio

2.5. Newsletters

Periodic newsletters are published to keep the public informed about the project's progress, key developments, and upcoming events. During the reporting period, two newsletters were released and published online, see Figure 6. To increase visibility, they were also shared through the project's LinkedIn page, ensuring broad dissemination among both professional and general audiences.



Figure 6 Bio-MegaFuel Newsletters ed. 1 and ed. 2.

2.6. Videos

A series of publicly available videos has been developed to present the project's objectives, ongoing activities and expected impact in an engaging manner. The interviews with the consortium partners provided. This approach supports transparency and broad outreach while maintaining the confidentiality of internal discussions.

Apart from technical videos, while the GA meetings and some contents of projects are confidential and accessible only to consortium partners, considerable effort has been made to maintain transparency and fostering public engagement. These videos provide external audiences with meaningful insight into the project's progress, without disclosing sensitive or restricted information.

All videos are disseminated via Bio-MegaFuel project's website and LinkedIn, also published on 1CUBE's YouTube channel.

- **Project's video:** The video about the Bio-MeGaFuel project was published in M6, see deliverable D5.8. This video introduced the project's concept, ideas and expected results, as shown in Figure 7.

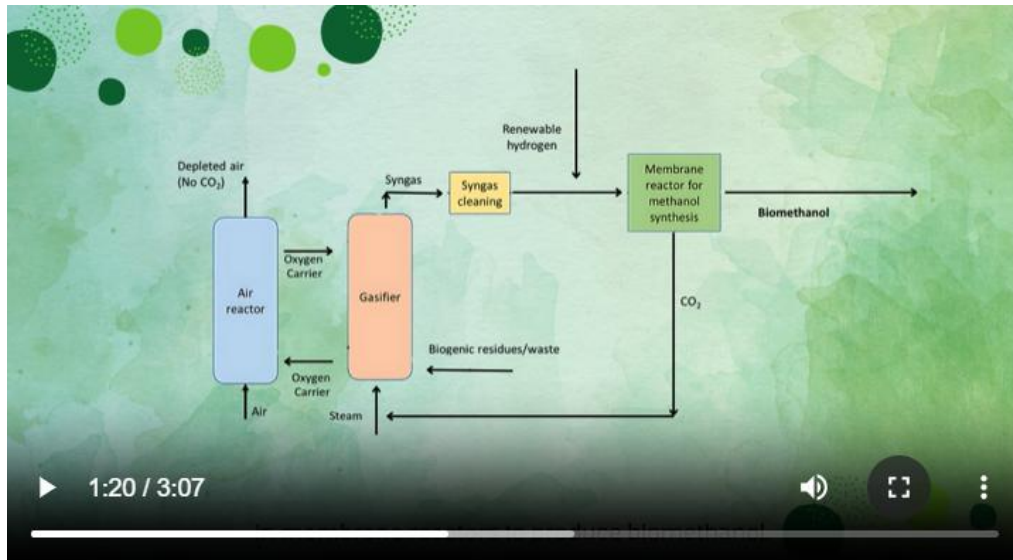
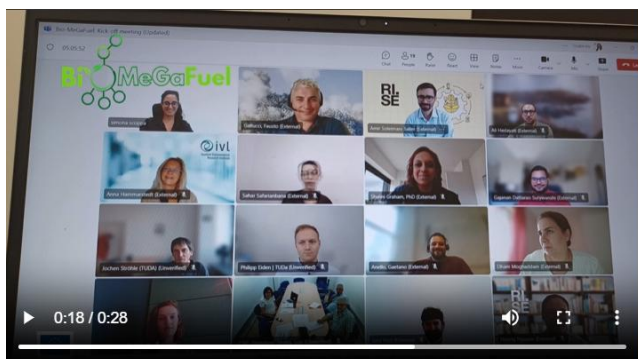


Figure 7 The first project video of Bio-MeGaFuel

- **Video snapshots from GA meetings:** Video snapshot during the kick-off meeting and the M6 GA meeting in Amsterdam were showed in Figure 8.



The Bio-MeGaFuel Consortium thanks the European Commission for supporting our project.

Figure 8 Video snapshots of the kick-off meeting and the M6 meeting of Bio-MeGaFuel

- **Interviews with partners:** To provide a clearer understanding of the project, two interviews with our partner GIDARA energy, working in WP2 and WP5 mainly, were prepared and uploaded. Apart from the video showcased their roles and contributions, they demonstrated the samples and classification of the feedstocks, helping to present the project's work in an accessible and engaging way. A shorter version (1 min) was prepared to be shared on LinkedIn and social media for broader impact. The screenshots are shown in Figure 9.



GIDARA Interview WP2 & WP5 (PART 1)



Meet the Partner GIDARA

video available from 28 Jan. 2026 midday

Figure 9 Two interviews (1 min and 9 min) with our partner GIDARA Energy

- **Video from dissemination activities:** For some of the dissemination activities, e.g. Bio-MeGaFuel in the ECOMONDO exhibition on 7th November 2025, the video recap was made and uploaded, as shown in Figure 10. Public from a far could also have a glimpse of that event.



Figure 10 Video recap of the exhibition ECOMONDO 2025

On 26 – 27 November 2025, Bio-MaGaFuel, among other 12 EU projects, hosted a joint workshop in Eindhoven. The full videos of the two-event were uploaded on the project website and youtube, as shown in Figure 11.



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Figure 11 Videos of different sessions of the International workshop in Sustainable & Circular Technologies

2.7. Public reports

Public reports as well as presentations and posters, papers etc. are freely available on the project website. Additionally, and to increase dissemination, a community of the Bio-MeGaFuel project is available in Zenodo (<https://zenodo.org/communities/bio-megafuel/>) where public documents are published and obtain a DOI number so that they can be easily referenced to.

2.8. Press releases and non-scientific articles

To further strengthen the project's visibility and overall impact, a press release was issued at the beginning of the year to formally present the project's progress and highlight key developments, ensuring broad outreach to industry representatives, media channels and the wider public, see Figure 12.

During the current reporting period, one of the project partners also published three articles on its internal public platform. These articles introduced general concept of Bio-MeGaFuel, the status from the glimpse of GA meetings and the partner projects. These articles allowing non-specialist readers to gain a clear understanding of the project's purpose and relevance, see Figure 13. All these press releases were published on LinkedIn and the project website.

Press release: <https://www.biomegafuelproject.eu/dissemination/>

Articles:

- CISC: [Boletín del Grupo Espanol del Carbón](#) (ISSN 2172-6094, no 76. page 32-26, June 2025)
- CISC: [Boletín 36 – ICB](#)
- CISC: <https://www.icb.csic.es/el-icb-acoge-la-reunion-de-dos-proyectos-europeos-centrados-en-la-conversion-de-residuos-en-recursos/>



The project is coordinated by Dr. Amir Soleimani Salim from RISE Research Institutes of Sweden.

The Bio-MeGaFuel project has been awarded €3.8 million in funding by the European Union through the Horizon Europe program. This support highlights the European Union's commitment to advancing sustainable energy solutions and addressing climate change.

With the expertise and dedication of our consortium, Bio-MeGaFuel is poised for success.

Stay tuned for the launch of our project website, where you will find detailed information and updates on our progress. Follow our LinkedIn page for the latest news and developments.

Press Release #1: September 2024

We proudly announce the launch of the “*Bio Methanol Production via Chemical Looping Gasification Coupled with Membrane Reactors*” (Bio-MeGaFuel) project.

This groundbreaking research and innovation initiative is designed to develop a novel technology for producing sustainable biomethanol from biogenic residues and waste with net zero emissions.

Bio-MeGaFuel focuses on establishing a novel, efficient, and scalable process to convert low-value biogenic residues and organic waste into biomethanol at low cost. By developing chemical looping gasification coupled with membrane reactors, the project aims to achieve Technology Readiness Level 5 (TRL 5) by 2028. This innovative approach will significantly lower the cost of biomethanol production while overcoming the constraints of conventional gasification and methanol synthesis methods. The project also aims to intensify the process, reduce the need for downstream treatments, and create synergies with renewable energy sources, such as renewable hydrogen integration.

This breakthrough will pave the way for greater adoption of biomethanol in the chemical industry, and notably as a sustainable fuel alternative for hard-to-abate sectors such as aviation and marine transportation, particularly in the use of methanol in fuel cells for mobility. By reducing production costs and scaling up biomethanol output, Bio-MeGaFuel aims to offer a renewable, economically viable solution to the fuel challenges faced by sectors critical to the global economy.

Bio-MeGaFuel is a collaborative effort between 10 partners from 5 European countries, namely:

- RISE Research Institutes of Sweden (Sweden)
- Technische Universität Darmstadt (Germany)
- Eindhoven University of Technology (Netherlands)
- Spanish National Research Council (CSIC) (Spain)
- IVL Swedish Environmental Research Institute (Sweden)
- Perpetual Next (Netherlands)
- ICUBE (Netherlands)
- Blue World Technologies (Denmark)

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Figure 12

First press release of the Bio-MeGaFuel project

Bol. Grupo Español Carbono
n°76 | Junio 2025

The Bio-MeGaFuel Project
The goal of Bio-MeGaFuel is to establish a novel, efficient, and scalable process to convert low-value biogenic residues and organic waste to biomethanol through chemical looping gasification coupled with membrane reactors. Figure 1 schematically shows the novel proposed plant. The process is based on the novel chemical looping gasification (CLG) concept for producing syngas from biogenic residues using fine reactors for methanol synthesis from syngas. The main reactions involved in the biomethanol production process are the following:
 $CO + 2H_2 \rightarrow CH_3OH$
 $CO_2 + H_2 \rightarrow CO + H_2O$
 $CO_2 + 3H_2 \rightarrow CH_3OH + H_2O$

Figura 1. Producción de biometanol a partir de residuos biogénicos mediante gasificación con transportadores sólidos de oxígeno acoplado con reactores de membrana.

Figura 2. Esquema del proceso de gasificación con transportadores sólidos de oxígeno.

Figura 3. Diagrama de valor de valor del proyecto Bio-MeGaFuel.

Consortium
Bio-MeGaFuel is a collaborative effort between 10 partners from 5 European countries, namely: RISE Research Institutes of Sweden (Sweden) - GIDARA Energy (Netherlands) - Technische Universität Darmstadt (TUDA) (Germany) - Eindhoven University of Technology (Netherlands) - Spanish National Research Council (CSIC) (Spain) - IVL Swedish Environmental Research Institute (Sweden) - Perpetual Next (Netherlands) - ICUBE (Netherlands) - Blue World Technologies (Denmark)

El ICB acoge la reunión de dos proyectos europeos centrados en la conversión de residuos en recursos

The following key specific objectives are targeted:
1. Developing biogenic residues and waste gasification with oxygen carriers to maximize the conversion of biogenic residues and wastes to syngas. Within Bio-MeGaFuel, it is intended to develop CLG of low-value biogenic residues and wastes in pilot units up to 1 MWth, thus establishing the technology at TRL 5-6. Here, 50-70 tons of biogenic residues will be gasified, and performance will be evaluated.
2. Developing membrane reactors for methanol synthesis: TUE will develop novel thin carbon molecular sieve membranes based on the patented technologies developed by TUE (together with Tecnalia) in the past years. The aim is to significantly increase the yield of biomethanol production from syngas by heat-exchange.
3. Developing single-step methanol synthesis with recirculation of CO₂ to maximize carbon and biomass conversion. One of the benefits of Bio-MeGaFuel is the application of membrane technology where unconverted biogenic CO₂ is separated and recirculated back to the gasifier to i) promote the gasification of biomass to reach a higher conversion, and ii) maximize the utilization of the carbon from biomass and its conversion to syngas to increase the syngas yield.
4. Exploitation and whole Value Chain analysis: Market analysis and product valuations will be done considering the novel route proposed in Bio-MeGaFuel, that includes a lower cost and lower GHG emission. Therefore, several aspects of the new production route will be analyzed through production potential and market analysis, conceptual value chain, business models for the biomethanol, and the barriers and analysis of the end users.

Biomass Chemical Looping Gasification: Ongoing activities at ICB-CSIC
The Combustion and Gasification research group of the Instituto de Carboquímica (ICB-CSIC) is involved in developing biogenic residues and waste gasification with oxygen carriers. In this sense, Biomass Chemical Looping Gasification (BCLG) represents an innovative process with the potential of reducing costs and emissions compared to other gasification technologies (B7). In BCLG, a solid oxygen carrier circulates between two interconnected fluidized bed reactors, fuel and air reactors, providing the oxygen needed for partial oxidation of the solid fuel and the heat necessary for the endothermic reactions taking place for syngas production. The main advantage of BCLG in the production of high-quality syngas with reduced tar content, non-diluted in nitrogen, without using costly pure oxygen and without CO₂ emissions to the atmosphere. In fact, BCLG process can operate at autothermal conditions with all the carbon compounds existing in the system in the fuel reactor stream. The separation and further storage of the CO₂ present in the syngas allows CLG operation without any emission.

Figura 3. Esquema del proceso de gasificación con transportadores sólidos de oxígeno.

The schematic illustration of this process is shown in Figure 3. The biomass is converted into gaseous (pyrolysis gas), liquid (tar) and solid (char) products in the fuel reactor and then these products may be partially oxidized by the oxygen carrier and the gasifying agent. Thus, solid fuel is converted to syngas gas and the oxygen carrier is reduced in parallel. The oxygen carrier is devolatilized by Me₂O_x and Me₂O_y, where Me₂O_x is a metal oxide and Me₂O_y is a reduced compound. The reduced oxygen carrier goes to the air reactor where it is regenerated in air atmosphere to begin a new cycle. Moreover, the reactions that occur in the air reactor are exothermic, so the required heat for fuel gasification is provided by the oxygen carrier circulating from the air to the fuel reactor.
A relevant feature in the process operation is the method for controlling oxygen used for gasification. This oxygen can be perfectly controlled by feeding the required amount in the air reactor, that it is fully transferred to the oxygen carrier and then to the fuel for gasification. To allow operation, a part

El ICB acoge la reunión de dos proyectos europeos centrados en la conversión de residuos en recursos

El Instituto de Carboquímica (ICB-CSIC) acoge del 16 al 18 de octubre de este año la reunión biológica de los proyectos europeos centrados en la conversión de residuos en recursos. El evento, el Consejo de Coordinación y el Comité de Seguimiento, se celebran en el edificio de ICB-CSIC. Esta reunión tiene como objetivo principal analizar el progreso de los proyectos y discutir las estrategias de trabajo para el futuro.

El proyecto Bio-MeGaFuel pretende desarrollar un proceso innovador para la producción de metanol a partir de residuos biogénicos y orgánicos. Este proceso se basa en la gasificación con transportadores sólidos de oxígeno acoplada con reactores de membrana. El objetivo principal es reducir los costos y las emisiones de CO₂ en comparación con otros procesos de gasificación.

El proyecto Biomass Chemical Looping Gasification (BCLG) representa un proceso innovador con el potencial de reducir los costos y las emisiones de CO₂ en comparación con otros procesos de gasificación. Este proceso se basa en la gasificación con transportadores sólidos de oxígeno acoplada con reactores de membrana.

Figura 3. Esquema del proceso de gasificación con transportadores sólidos de oxígeno.

Figure 13 Articles written by our partner CSIC

2.9. Publications

During the reporting period, CSIC published one paper entitled “Chemical looping gasification with microalgae: intrinsic gasification kinetics of char derived from fast pyrolysis” in *Energies* (2025) under peer reviewed. We are expected more publications in the second half of the project period.



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3. Dissemination activities

Presentations and dedicated sessions are being delivered at major conferences to highlight the project's innovations, research findings, and potential applications. In addition to these engagements, the consortium will organize and participate in workshops aimed at fostering in-depth discussions, encouraging feedback, and promoting collaboration in the future. These interactive sessions are designed to facilitate the transfer of knowledge, stimulate new ideas, and ensure that the insights gained from the project are widely disseminated across relevant communities. So far, the partners presented the Bio-MeGaFuel project in the following events:

- 6th – 10th April 2025, Francisco García Labiano (from CSIC Innovación) presented in the 25th International Conference on Fluidized Bed Conversion (FBC25), in Nanjing, China, as shown in Figure 14.



Figure 14 Francisco García Labiano presented in FBC25

- On 11th April 2025, he also took part with a plenary lecture in a workshop on “Exploring Fluidized-Bed Reactor Designs in Chemical Looping Systems”, in Huazhong University of Science and Technology, China, see Figure 15.



Figure 15 Francisco García Labiano had a plenary lecture in Huazhong University of Science and Technology, China.

- 24th Sep 2025, partners from RISE and TUE joined the online Tech Forum entitled “BioFuels & sustainability” to discuss the current technologies and challenges of the biofuel production and market adoption. The video recap will be uploaded online via project website and youtube, see Figure 16.



Figure 16 Partners from RISE and TUE joined the online Tech Forum organised by 1CUBE

- 19th – 22nd October, XVII Reunión del Grupo Español del Carbón, organised by Spanish Coal Group (GEC) with the support of the partners of the Institute of Carbon Chemistry (ICB-CSIC), in Zaragoza, see Figure 17.

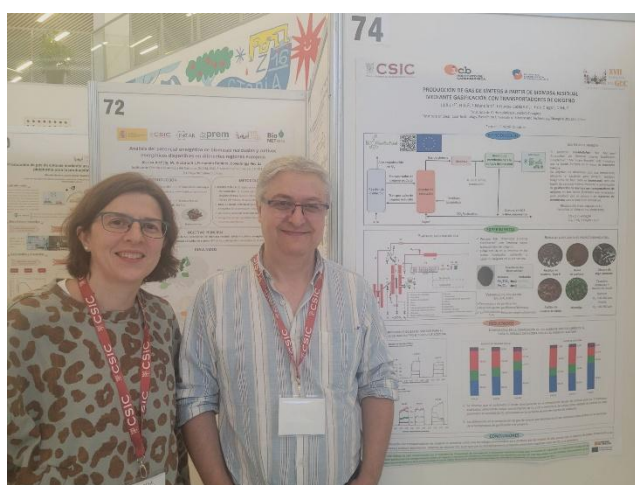


Figure 17. CSIC representatives in XVII Reunión del Grupo Español del Carbón



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- 21st – 23rd Oct 2025, Amir Soleimani Salim did a general presentation on Bio-MeGaFuel "Bio Methanol Production via Chemical Looping Gasification" during the SEPTech conference in Eindhoven, see Figure 18. This event brings together over 100 stakeholders from various industries, policymakers and academia on site.



Figure 18. Our project coordinator in the SEPTech conference

- 26th – 29th Oct 2025, Gaetano Anello (TUE) presented in 17th International Conference on Catalysis in Membrane Reactors (ICCMR17), as shown in Figure 19. His presentation is "Modeling of methanol synthesis using novel carbon-based membranes in a packed bed membrane reactor".



Figure 19. Gaetano Anello in ICCMR 17



- 7th Nov 2025, Bio-MeGaFuel has been selected to feature at the European Commission stand at Ecomondo to showcase its achievements. Only 15 projects were chosen this year. Ecomondo took place from 4–7 November 2025 at the Rimini Expo Centre in Italy, has attracted over 100,000 visitors.

CSIC provided feedstock samples for demo. RISE, 1CUBE and TUE represented Bio-MeGaFuel to orally introduce the project to visitors in ECOMONDO, as shown in Figure 20.



Figure 20. Bio-MeGaFuel project in the EU booth in ECOMONDO

- 26 - 27 Nov 2025, International Workshop on Sustainable & Circular Technologies, Eindhoven, see Figure 21. This is a two-day event uniting 13 of the most forward-thinking EU-funded projects driving innovation in circular system. Bio-MeGaFuel is one of the 13 organizers. This workshop served as a collaborative platform for researchers, technologists and industry players dedicated to building a more sustainable, resource-efficient, and climate-resilient Europe. Our project coordinator joined a panel discussion with other EU project coordinators, to have an open exchange on current technological bottlenecks, challenges, and opportunities across different projects. Meanwhile, partners from TUDA, CSIC, GIDARA Energy and TUE did presentation. 1CUBE organized the event. Perpetual Next and IVL also had partners joined the workshop, see Figure 21.



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Figure 21. Bio-MeGaFuel members in the international workshop on Sustainable & Circular Technologies



- 26th Jan 2026, TUDA presented in the webinar “Chemical looping processes” with one general project presentation & one presentation on “Pilot testing of Chemical Looping Combustion for Biofuel Production”, see the screenshot at Figure 22. At peak, there were 69 participants online.

Figure 22. Screenshot of TUDA presenting in the webinar

- 29th Feb 2026, CSIC was invited by European Gas Research Group (GERG) to give a general talk on Chemical Looping technology. This teleconference was restricted to the members of European Gas Research Group. They presentation a general introduction of the Bio-MeGaFuel project.
- 27th – 28th Jan 2026, Bio-MeGaFuel project will co-organize the 3rd Winter School on “Gasification and Membrane Reactor” in Microlab, Eindhoven, together with MemCat and HERMES project
CSIC and TUE will do oral presentations for WP2 & WP3; while Perpetual Next and Gidara Energy will present from industrial perspectives.

By maintaining a strong presence at these events, the Bio-MeGaFuel project strengthens its visibility, expands its network, and reinforces its impact across multiple sectors.

4. Liaison /collaboration with relevant projects

Bio-MeGaFuel has been actively looking for collaboration among relevant EU projects. Our commitment to fostering synergies with other EU-funded initiatives helps amplify the overall impact of European research and innovation. By engaging with related projects, networks, and clusters, we support knowledge exchange, strengthen dissemination activities, and facilitate smoother adoption of emerging technologies.

Partner projects with Flexby

In September 2025, Bio-MeGaFuel had been a partner project with Flexby, see the news release on their website in Figure 23.





Figure 23. News release of Flexby

Flexby is an EU-funded initiative developing advanced biofuels from industrial sludge and microalgae using microwave-assisted pyrolysis. It converts the pyrolysis products into heavy-transport fuels and bio-hydrogen via a novel hydrogen-free hydrodeoxygenation process. Powered by AI-driven optimisation and circular economy principles, Flexby aims for cost-efficient, low-carbon biofuel production.

In May 2026, Flexby and Bio-MeGaFuel, together with other 5 EU projects will co-organise a symposium “From Waste to Sustainable Fuels” in Barcelona, as shown in Figure 24.



Figure 24. Banner of the joint symposium of “From Waste to Sustainable Fuels”

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Partner projects with EMPHATICAL

Currently, Bio-MeGaFuel and EMPHATICAL has agreed to form a partnership. The news will be released when the details are confirmed. Through this partnership, both projects will organise dissemination and communication events together for broader outreach and impact.

Partner projects with Bio-FlexCLC

Bio-MeGaFuel and Bio-FlexCLC have several partners in common within the consortium. In the project period, they already co-organised Tech Forum in September 2025, a joint-workshop in November 2025 and a webinar in January 2026, Figure 25.



The figure displays three promotional posters for events co-organised by Bio-MeGaFuel and Bio-FlexCLC. The first poster on the left is for a 'VIRTUAL TECH FORUM' on 'Biofuels & Sustainability' held on Wednesday, 24th Sep 2025, from 10:00-11:00 (CET). It features speakers Prof. Fausto Gallucci and Dr. Sennal A. Mesfun, and is funded by the European Union. The middle poster is for an 'INTERNATIONAL WORKSHOP ON Sustainable & Circular Technologies' held on 26-27 NOV 2025 at Aristo Eindhoven. It is organized by a consortium of partners including CUBER, EDLEFINE, MEMCAT, CARBIO, superVal, and others. The final poster on the right is for a 'WEBINAR Chemical Looping Processes' on 26 Jan 2026 at 10 AM. The program includes an introduction by Prof. Fausto Gallucci, presentations on flexible chemical looping pathways and low-carbon production, and a pilot testing update. The webinar is accessible via Teams Link.

Figure 25 D&C activities that Bio-MeGaFuel and Bio-FlexCLC co-organised

5. Planned dissemination and Communication activities

Below is the list of upcoming dissemination and Communication activities

Date	Bio-MeGaFuel
25- 26 Feb 2026	3 rd Winter School on “Gasification and Membrane Reactor” CSIC and 1CUBE will present. Partners from TUE, Gidara Energy and Perpetual Next will participate.
6 March 2026 CET: 3 – 5 pm	Webinar organized by Genius Fuels <ul style="list-style-type: none"> • RISE will give a general introduction on the project • 1CUBE will do a presentation on “Membrane reactors for ethanol and for DME production”
10 – 13 May 2026	TUE will join the International Symposium on Chemical Reaction Engineering, ISCRE 29
19 – 22 May 2026	TUDA and Gidara Energy will attend the 34th European Biomass Conference and Exhibition, EUBCE 2026



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28 – 29 May 2026	Symposium “From Waste to sustainable Fuels” in Barcelona <ul style="list-style-type: none">• RISE & 1CUBE will do presentations
25 -29 October 2026	18th International Conference on Greenhouse Gas Control Technologies (GHGT-18) to be held in Perth, Australia.

Project cluster

Recently, **Bio-MeGaFuel**, **Bio-FlexCLC**, **COUPLED**, **HYIELD**, **PYRAH2** and **BioNETzero** are in active discussion in forming a project cluster related to chemical looping and gasification. As we are sharing common objectives in decarbonization and advancing carbon capture technologies.

This partnership aims to enhance visibility and impact through coordinated communication and dissemination actions. Joint communication efforts include online campaigns around key milestones, shared newsletter, and participation in both virtual and in-person events. On the dissemination side, the partnership plans to co-organize webinars and workshops, contribute to joint publications, and leverage EU-level tools like the Horizon Results Booster to amplify outcomes. Through this collaborative approach, the partnership aims to foster knowledge exchange, maximize outreach, and ensure that their collective results reach a wide and relevant audience.



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6. Conclusion

In summary, the dissemination and communication activities implemented during the first 18 months have created a strong foundation for increasing the project's visibility, reinforcing stakeholder engagement and raising public awareness. The actions foreseen in the Dissemination and Communication Plan are progressing as scheduled, with important milestones achieved across a range of channels and communication formats.

Through a combination of digital communication, scientific and non-scientific publications, accessible public materials and joint initiatives such as the Tech Forum and free international workshop, the project has successfully reached both specialised audiences and the broader public. These activities not only highlight the project's advancements but also demonstrate its relevance and potential impact across multiple sectors.

In the next phase, the consortium will continue to implement the planned measures while further strengthening cooperation with other EU-funded initiatives. Enhanced collaboration and clustering activities will support knowledge exchange, create synergies and increase the project's added value within the European research and innovation ecosystem.

7. Acknowledgement

This project has used a similar template with the Bio-FlexCLC project (Grant Agreement number: 101147904), following EU recommendations. Ad hoc modifications were added to comply with the Grant Agreement conditions for Bio-MeGaFuel project (Grant Agreement number: 101147737).

Only the template of the deliverable has been used, the claimed person months appropriately reflected by the execution of the dissemination and communication activities as listed in the report above.