



# Call for Papers

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**EUBCE 2025**  
33rd European Biomass Conference & Exhibition

[www.eubce.com](http://www.eubce.com)  
9 – 12 June  
Conference and Exhibition  
**Valencia, Spain**

# Message from the Technical Programme Chair



I am pleased to to invite you to the 33rd edition of the European Biomass Conference and Exhibition, EUBCE 2025, that will be held in Valencia, Spain, between 9th and 12th June 2025. The European Commission's Joint Research Centre continues to provide scientific support to this event and its scientific programme coordination.

While the climate crisis is accelerating at pace, there is an equally urgent need for accelerating the transition to climate neutrality. The transition to a sustainable low carbon energy system is a cornerstone of the ambitious climate goals and a key opportunity to keeping EU industrial leadership in clean technologies and enhance industrial competitiveness. To achieve climate neutrality, we need to increase the deployment of renewable and low carbon energies, rapidly phasing out of fossil fuels leveraging all available solutions through a technology-neutral approach.

As we phase out fossil fuels, biomass can have a role to play in the decarbonisation of the economy: from energy, transport to industrial sectors. Solutions are available for biomass to produce energy, sustainable fuels and bio-based materials and chemicals. 'Negative-emission' bioenergy could contribute to increase the flexibility of the energy system to accommodate a growing share of renewables in the grids. The use of sustainable advanced biofuels could contribute definitively for the decarbonisation of the aviation and maritime sectors and could also compensate, on short term, for a slower uptake of electrification in road transport.

The EUBCE programme for 2025 is structured as usual in horizontal themes dealing with biomass resources; sustainability, impacts and policies and biomass integration, as well as vertical themes addressing technologies for biomass conversion to bioenergy, sustainable biofuels; and bio-based products and bio-chemicals. Some adjustments have been made to enable a more focus on certain key areas and areas, such as sustainable biomass cultivation, biomass integration and new processing technologies to fuels, energy and materials. During the week, a wide range of interactive panel discussions and parallel events will complement the conference programme.

I invite you to address, in the conference, the potential of biomass to be converted into a wide range of end products, the opportunities and challenges associated with different conversion technologies and new, innovative approaches to bioenergy biofuels, bio-materials and bio-chemicals production. There is still large potential for innovation and technological improvements in various industries and for this, there will be space to discuss all opportunities and challenges of industrial applications. In the same time, we have to address all dimensions of sustainability (environmental, social, economic) using all available tools, including AI tools, to ensure the potential negative impacts of the use of biomass are reduced.

I look forward to receiving your abstract for consideration for inclusion in our EUBCE2025 programme.

Join us in Valencia at EUBCE 2025!

Dr. Nicolae Scarlat  
European Commission JRC  
EUBCE Technical Programme Chair

# Message from the Industry Programme Coordinator



Dear Biomass Stakeholder,

Since the EUBCE at Marseille the global legislative landscape has rapidly been changing with new policies, market actions and mandates. Policy targets are high and overambitious to the extent that stakeholders are concerned that the policy targets are unrealistic and not achievable.

In most of the cases the burden is placed on the industry to deliver huge volumes of biomass feedstocks, biofuels, biomaterials and biochemicals in an unprecedented fashion and rush. The size of the required investments entailed in such accelerated deployment is equally unheard of while at the same time investors are shy due to the ever-changing legislative landscape. Significant differences in sustainability criteria related to food-based resources between the EU and other economic areas make the investors even more hesitant.

At the same time there are important efforts by the technology developers and the biomass industry to integrate innovation in the development of technologies at high TRL in order to improve the carbon conversion efficiency of their various processes to valuable products.

All the above issues result into a complex and multifaceted situation with more questions than answers.

In Valencia we can't promise that we will be able to answer all your questions; however, we aim to have an excellent array of speakers in practically all the above issues and numerous of your peers attending either as speakers or in the exhibition. You are given a unique opportunity to join us and network or engage with your peers.

The EUBCE in Valencia is the conference to attend in 2025!

Dr. Kyriakos Maniatis  
Former European Commission  
EUBCE Industry Programme Coordinator

# EUBCE 2025 Topics Science-focused

## 1. Sustainable resources for decarbonising the economy

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### 1.1 Biomass resources and potentials

- Assessments of biomass potentials and land availability at various spatial and temporal scales;
- Resource mapping, spatial modelling and remote sensing;
- Biomass supply: by-products and residues from agriculture and forestry, agro-food waste, agro-industrial feedstocks and side streams;
- Biomass characterisation, harvest technologies, storage and logistics;
- Biomass mobilisation, boosting efficient production addressing competition.

### 1.2 Sustainable integrated agricultural management practices

- Innovative agri-forestry systems for biomass production for energy and materials integrated into traditional agri-forestry systems;
- Biomass plantations increasing sustainability and ecosystem services;
- Novel crops, multi-purpose crops, intercropping and alternative cropping systems;
- Integrated biomass production systems with Low-ILUC impact feedstocks;
- Crops from marginal, contaminated and degraded lands;
- Measures for soil quality and soil fertility improvement - compost, digestate, biochar, reducing leaching;
- Phytoremediation solutions for marginal, degraded and contaminated lands.
- Biomass production, carbon farming enhancing carbon storage and soil emission reduction.

### 1.3 Algae and aquatic biomass production systems

- Identification, assessment and optimisation of algae strains;
- Technologies and systems for algae cultivation, nutrition and harvesting;
- Integration of wastewater treatment into algae systems;
- Algae production systems, marine farming systems;
- Aquatic waste streams;
- Aquaculture and aquatic waste streams;
- Algae harvesting, drying, oil and chemical extraction.

## 1.4 Municipal and industrial wastes

- Potential of Municipal Solid Waste (MSW) for bioenergy, biofuels and bioproducts;
- Availability of biowaste from MSW;
- Techniques for source separation;
- Industrial wastes;
- Downstream use of pulp and paper waste;
- Sewage sludge, slaughterhouse waste;
- Integrated waste management systems.

# 2. Sustainability, impacts, policies and systems analysis

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## 2.1 Sustainability, socio-economic impacts and public acceptance

- Sustainability aspects of biomass production and use;
- Sustainability schemes, sustainability standards and products certification;
- Socio-economic aspects, benefits and socio-economic opportunities;
- Competition and risk mitigation of the increased use of biomass;
- Bioenergy, food security and local, traditional use of biomass;
- Bioenergy contribution to the Sustainable Development Goals (SDG);
- Engaging society, improving citizen awareness and acceptance;
- Promoting good practices for bioenergy.

## 2.2 Environmental impacts

- Biomass and land use, agricultural intensification, water and air emissions from biomass production and conversion;
- Biomass production preserving biodiversity and ecosystem services;
- Land use change impacts, monitoring and addressing indirect land use changes;
- Land use and land governance;
- Biomass production and water use, energy, land and water interactions;
- Trade-offs between different impacts;
- Environmental Life Cycle Assessments.

## 2.3 Climate impacts and GHG performance

- Climate impacts of biomass, biofuels, bioenergy and bio-based products production;
- Assessment of climate change mitigation potential;
- GHG emissions, LULUCF and sustainable forest management;
- Assessing direct and indirect land use change impacts;
- Carbon storage on land, including biochar;
- Innovative carbon utilisation options;
- Assessing GHG of biomass pathways;
- GHG Life Cycle Assessments.

## 2.4 Biomass strategies and policies

- Policies for the sustainable and circular economy;
- Agriculture, forestry and rural development;
- Role of biomass and biomass policies addressing targets for 2030 and beyond;
- Bioenergy and bio-based products contribution to a low carbon economy, carbon emissions, LULUCF and emission trading;
- Biomass and rural development, opportunities in the sustainable and circular economy;
- Global bioeconomy advancements, international cooperation for a bioeconomy;
- Strategies for the integration of bioenergy into a low-carbon economy;
- Strategies for the integration of bio-based products into the chemical industry.

## 2.5 Overall system analysis, decision making and IA uses

- Sensing and control applied to bioenergy systems;
- Process simulation, modelling and CFD;
- Operation, automation, control and system integration;
- Supply chain logistics and use of AI.

## 3. Biomass, bio-based products and bioenergy integration

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### 3.1 Biomass integration into energy systems

- Innovative solutions for small communities, integrating bioenergy and other renewables;
- Integrated bioenergy RES hybrid systems and technologies;
- Bioenergy for electricity grid stability and gas grid balancing concepts;
- Bioenergy solutions for rural electrification concepts and off-grid systems;
- Biomass in district heating and cooling, poly-generation energy networks;
- Greening the gas grids (biomethane, hydrogen etc.);
- Processes integrating biogenic or air-captured carbon CO<sub>2</sub> for improved conversion efficiencies.

### 3.2 Biomass use in biorefineries

- Integrated and innovative biorefinery concepts for bio-based products, energy and fuels;
- Process design and business development;
- Integration of biochemical and thermochemical processes into biorefineries;
- Biochemical and thermochemical conversion processes of biomass to fuels, energy, bio-based products;
- Multi-purpose and versatile schemes;
- Renewable energy integration;
- Assessment models and tools for biorefineries.

### 3.3 Resource efficient bioeconomy

- Approaches for efficient management of natural resources (land and water);
- Promoting resource efficient value chains;
- Sustainable circular economy and cascading use of biomass;
- Competition and risks of the increased use of biomass;
- Opportunities of biomass use for food, feed, fuels, bio-based products;
- Innovation, growth and job creation;
- Cross-sectorial synergies.

### 3.4 Market implementation, investments & financing

- Initiatives and policies for market uptake and support schemes;
- Initiatives for decarbonisation of the economy;
- International cooperation for large scale technology implementation;
- Scale-up and market implementation of new technologies;
- Economics, financing of bioenergy and bio-based projects and risk assessments;
- Global bioenergy and bio-based products markets;
- Biomass trade, contracting and logistics;
- Innovative business models.

## 4. Biomass conversion for bioenergy

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### 4.1 Biomass pre-treatment and production of intermediates

- Biomass pretreatment and densification;
- Physical, chemical, physico-chemical and biological methods for biomass pretreatment;
- Process development and optimisation;
- Characterisation and utilisation of solid fuels and intermediates;
- Logistics, storage and distribution.

### 4.2 Advanced biomass combustion

- Innovative concepts for small scale and medium scale combustion;
- Advanced and innovative small scale and medium scale systems;
- Large scale advanced combustion systems;
- Process modelling and monitoring;
- Advanced process and emission control systems;
- Tri-generation (power, heat and cooling);
- Innovative concepts and thermodynamic cycles;
- High efficiency, increased steam parameters plants;
- Bioenergy and Carbon Capture and Storage (BECCS) enabling negative GHG emissions.



### 4.3 Gasification for power, CHP and polygeneration

- Fundamental studies;
- Technology development;
- Process modelling and monitoring;
- Gas cleaning and upgrading;
- Syngas utilisation in engines, turbines and fuel cells;
- Advanced process control systems;
- By-products utilisation.

### 4.4 Gasification for synthesis gas production

- Fundamental studies;
- Technology development;
- Advanced gasification systems;
- Gas cleaning, reforming and upgrading for BTL and SNG applications;
- Bio-Synthetic Natural Gas (Bio-SNG);
- Process control systems;
- By-products utilisation.

### 4.5 Anaerobic digestion for biogas and biomethane production

- Anaerobic digestion process improvement;
- Advanced plant and fermenter concepts;
- Optimising conversion, improving design and process integration;
- Dry fermentation and thermophilic processes;
- Anaerobic digestion of innovative feedstocks (straw, waste, algae, etc.);
- Biogas utilisation for power, CHP and poly-generation;
- Biogas upgrading to biomethane;
- Biomethane injection into the grid.

## 5. Biomass conversion to intermediate bioenergy carriers and sustainable biofuels

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### 5.1 Pyrolysis

- Production of liquid bioenergy carriers from solid biomass;
- Fundamental studies;
- Technology advances;
- Process modelling, improvement and optimisation;
- Bio-oil purification, upgrading and utilisation (combustion, chemical extraction, gasification, etc.);
- By-product utilisation;
- Wastewater treatment;
- Energy balance and techno-economic analysis.

### 5.2 Hydrothermal processing

- Advances in hydrothermal liquefaction, supercritical water gasification and hydrothermal carbonisation;
- Process fundamentals and studies;
- Technology and process improvement;
- Biocrude production, purification, upgrading;
- Value-added compounds extraction;
- Energy balance and techno-economic analysis.

### 5.3 Biofuels and renewable hydrocarbon biofuels

- Conventional and advanced biofuels for road, aviation and maritime sectors;
- Oil-based fuels and renewable hydrocarbon biofuels from lipids and lignocellulosic biomass;
- Biochemical routes for alcohols, pretreatment of lignocellulosic biomass, enzymatic hydrolysis and novel C6 and C5 fermentation techniques into alcohols;
- Biofuels production from algae, technology advances;
- Bioprocesses for microbial oils production;
- Co-processing biomass feedstock with fossil fuels in common processes;
- Downstream wastewater treatment;
- Technology and process improvements, energy balances and techno-economic analysis.

## 5.4 Biofuels and synthetic fuels from biomass and hydrogen

- Innovative processes for synthetic fuels production from lignocellulosic biomass;
- Technological innovations of Power-to-gas, Power-to-liquids, recycled carbon fuels, etc.;
- Hydrogen production pathways: thermochemical, electrolytic, photolytic, biological processes;
- Hydrogen for stationary and mobile applications;
- Electrochemical pathways to produce platform chemicals or fuels;
- Alternative fuels and hydrogen logistics and infrastructure;
- Hybrid processes combining hydrogen with biogenic CO<sub>2</sub>;
- Techno-economic assessments.

# 6. Biomass conversion to biomaterials and chemicals

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## 6.1 Processes for bio-based chemicals materials

- Advances in renewable chemicals;
- Production of high-added value organic compounds;
- New products from biomass: bio-based chemicals and polymers, bio-catalysts, additives, bioplastics, biomaterials, biocomposites etc.;
- Production of organic fertilizers, biochar, plant biostimulants and compost;
- Nutrients cycles and recovery (nitrogen, phosphorus, potassium);
- Assessing most promising value chains, processes and concepts;
- Perspectives for bio-based chemicals and materials and contribution to the climate neutrality goals.

## 6.2 Platforms for bio-based chemicals and polymers

- Fuels and chemical building blocks from synthesis gas;
- Production of value added chemicals and macromolecules from lignin;
- Production of fine chemicals from sugar and oil platforms;
- Process development, maximising conversion efficiency;
- Technical and biological barriers and economic considerations.

## 6.3 Co-production of biofuels and biochemicals

- Combined production of fuels, chemicals and materials from biomass;
- Innovative processes integrating fuel production into bio-based refineries;
- Process integration;
- Co-production options and economics;
- Technical and economic assessments.

# EUBCE 2025 Topics Industry-focused

## 7.1 Sustainable biomass production and carbon management for industrial applications

Examples at commercial or demonstration scale on the sustainable biomass production with attention to carbon management systems. Abstracts may address cover crops, alternative crops such as short rotation coppice and miscanthus, abandoned or degraded lands etc.

## 7.2 Sustainability, GHG performance and socioeconomics aspects in Industrial applications for advanced biofuels

Sustainability, GHG performance and socioeconomic aspects are widely examined in all value chains, however when industrial scale plants are built these issues need to be revisited at the specific characteristics of the location of the plants. Emphasis should be given to studies and approaches addressing the above issues at the local level.

## 7.3 Biomethane production

Industrial scale applications for the production of biomethane from biomass residues, dedicated crops and waste streams for transport applications or injection in the natural gas grid.

## 7.4 Advanced biofuels – Road & heavy-duty transport

Novel conversion technologies to produce advanced biofuels for the wider road transport are needed to increase the availability while improving the sustainability aspects of commercially available biofuels. Abstracts should address the innovative production technologies integrated in the value chain as well as any policy related issues in meeting the EU's Fit for 55 targets.

## 7.5 Advanced biofuels – Aviation

Abstracts should address the large-scale production of sustainable aviation fuels providing information on the complete value chain. The authors should also address policy issues and market barriers for widespread deployment.

## 7.6 Advanced biofuels – Shipping

Abstracts should address the large-scale production of sustainable fuels for the shipping sector providing information on the complete value chain. The authors should also address policy issues and market barriers for widespread deployment.



## 7.7 Thermochemical Biomass conversion

Significant advances have been made recently in thermochemical biomass conversion; however, technical and process optimisation problems related to the overall system reliability may persist. Abstracts should describe the conversion technology in detail and how the work presented improves overall system reliability, increases carbon conversion efficiency and overcomes persisting technical problems.

## 7.8 Biological Biomass conversion

Significant progress has been achieved in biological conversion of biomass to fuels, intermediates and chemicals. However, technical and process optimisation problems related to the integration of bacteria, yeasts and enzymes in industrial processes persist in some conversion technologies which can lead to reduced performances . Abstracts should describe the conversion technology in detail and how the work presented improves overall system reliability, increases carbon conversion efficiency and overcomes persisting technical problems.

## 7.9 Innovative Biorefineries: production of bioproducts & biochemicals

Abstracts should address the production of sustainable bioproducts and biochemicals from various biomass sources such as dedicated crops, residues and algae. Emphasis should be given to the complete value chain as well as the market deployment.

# Abstract Submission Guidelines

Guidelines for submitting abstracts to the EUBCE 2025 Conference.

## 1. Content and format of your abstract

Abstracts should present new scientific research not previously submitted to other conferences or publications. Each submission will be reviewed by at least three independent experts from the biomass community.

### Language

English

### Format

Download the [Abstract Template \(MS Word, .docx\)](#)

Abstracts should be written in English and consist of 1 page, with up to 3 additional pages for explanation. Key sections to include:

- Full paper title
- Full contact details (name, affiliation, address, email, phone) for one corresponding author
- Names, affiliations, and emails for all co-authors
- Abstract summary
- Relevant topic and subtopic number, with justification
- Aim and approach used
- Scientific innovation and relevance
- Results or preliminary conclusions

### Length

Total length should not exceed 4 A4 pages. A minimum of 2 pages is recommended to ensure adequate evaluation. For journal publication consideration, at least 3–4 pages are required.

## 2. How to submit your abstract

### Steps for Submission:

1. Log in to the [User Area](#) and click “Abstract submission”.
2. Ensure the correct person is logged in as the corresponding author for all communication.
3. Abstracts must be submitted by 8 November 2024.
4. Follow the step-by-step process:

### Step 1: Abstract

- Enter title, subtopic, presentation type, and a summary.
- Option to apply for the “Student Award.”
- Ensure the correct subtopic is selected.

### Step 2: Authors

- Enter author details as per your abstract.

### Step 3: Document Upload

- Upload your PDF abstract (unprotected).
- For “Student Award” applicants, upload your recommendation letter.

### Step 4: Journal Publication

- Optionally apply for journal publication (select one or more journals).

### Step 5: Submit

- Finalize by clicking “Submit.”
5. You will receive an automatic confirmation email within 24 hours. If not received, contact [papers@etaflorence.it](mailto:papers@etaflorence.it).
  6. Modifications and replacements can be made until the submission deadline. Click on the abstract title under “Abstract submission”.
  7. To withdraw after the deadline, email [papers@etaflorence.it](mailto:papers@etaflorence.it).
  8. For multiple abstracts, repeat the submission process.

## 3. Abstract evaluation

### Review Process

Abstracts will be reviewed by an international Scientific Committee of over 150 experts.

Key selection criteria:

- Content aligned with the subtopic
- Relevance to the biomass community
- Innovation and scientific quality

Selected abstracts may be for plenary, oral, or visual/poster presentation, with plenary and oral sessions covering broader topics. Corresponding authors will be notified of the outcome by the end of December 2024.

### Presentation Formats:

- Plenary: 20 minutes with PowerPoint (including questions)
- Oral: 15 minutes with PowerPoint (including questions)
- Visual/Poster: Displayed for 4 days with designated interaction time

## 4. Key dates

- 8 November 2024: Deadline for abstract submission
- November – December 2024: Review and evaluation by the Scientific Committee
- From 18 December 2024: Notification of authors (accepted and rejected abstracts)
- April / June 2025: Online submission papers for EUBCE Proceedings

## 5. Registration for presenters/authors

- All presenters and authors must register and pay the conference fee. Acceptance of an abstract does not register you for the conference automatically.
- For further questions, please contact us at [papers@etaflorence.it](mailto:papers@etaflorence.it).

## 6. Helpful Links

Essential links to apply and register:

- EUBCE 2025 conference topics and sub-topics  
[eubce.com/call-for-abstracts-2025](https://eubce.com/call-for-abstracts-2025)
- Publications  
[eubce.com/publication-of-papers](https://eubce.com/publication-of-papers)
- To submit an abstract for EUBCE 2025 visit the online portal  
[ssl.conference-biomass.com](https://ssl.conference-biomass.com)