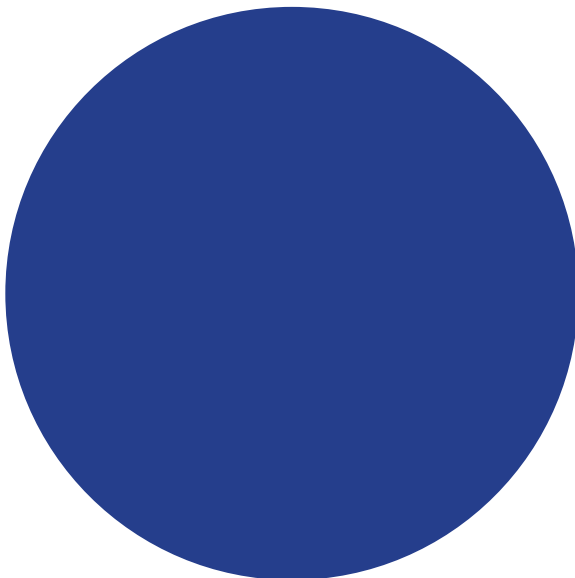
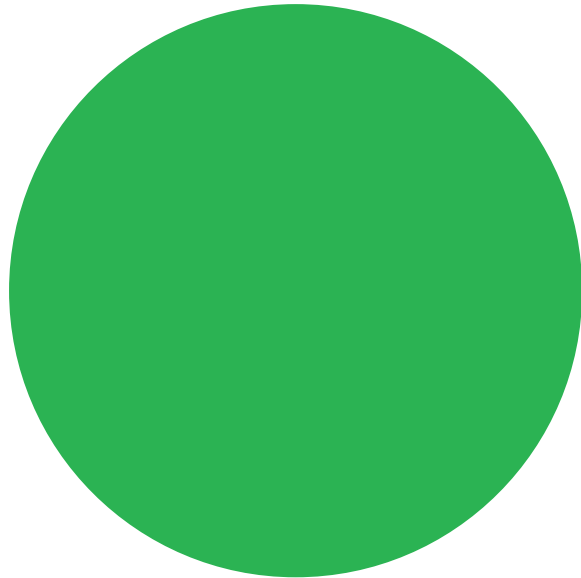


Report

Shaping the future of the European bio-based sector

CBE JU
Stakeholder Forum 2023

6-7 December
Brussels



KEY HIGHLIGHTS

- **Over 50 renowned speakers** representing the bio-based sector, industries taking up bio-based solutions, research and innovation providers, public sector, local authorities and other stakeholders shared insights on what drives the sector's considerable contribution towards a sustainable future for Europe.
- Nine engaging **panel discussions** explored key challenges and opportunities in the bio-based sector, across three themes:
 - How to stimulate demand for circular bio-based solutions?
 - How to facilitate access to finance to scale up circular bio-based production in Europe?
 - What R&I is needed to keep the European leadership in bio-based sector in the medium-long term?
- The **exhibition of 30 highly innovative bio-based solutions** made by CBE JU-funded projects demonstrated the industry's commitment to pushing the boundaries of technological advancements, and the maturity of these solutions for market uptake.
- Two workshops focussed on **measures in support of a successful bio-based sector's roll-out in Europe**: providing the education and training that address the skills needed in the sector and making the sector attractive for young professionals.
- **400+ participants from 30+ countries** attended the event and its multiple networking opportunities.

KEY TAKEAWAYS

- **CBE JU is a success story in advancing the European bio-based sector**, in terms of de-risking investments and engaging a fragmented stakeholder community around a common goal.
- **Bio-based production** must reach beyond the replacement of fossil-based products with bio-based ones: it **has to be circular, minimise the use of natural resources and consider environmental, social and economic impacts**.
- **The regional dimension is key in the bioeconomy**, since biomass is locally sourced and the bio-based sector is an important booster of local economies. Regions are also important drivers of innovation.
- The European bio-based sector needs to **present a strong common narrative** to support the take-up of bio-based solutions by both large industries and consumers.
- The shift from fossil-based to bio-based production and consumption requires **consistency in legislation and policy objectives, supportive industrial regulation, access to finance, and adapted standardisation**.

- The transition to a circular bio-based economy can only happen through **true collaboration among all stakeholders**, ranging from primary producers to researchers, to small businesses and large industries as well as **acceptance by consumers**.

CONCLUSIONS AND RECOMMENDATIONS

How to stimulate demand for circular bio-based solutions?

CBESF23 participants identified the following **challenges**:

- *Lack of consumer awareness and common narrative*: A single, strong and clear science-based narrative is required from the sector in order to stimulate consumer demand showcasing the value of bio-based solutions and better connect with policymakers. Education plays a role here as to why bio-based solutions should be preferred.
- *Slow adoption by large industries*: The availability and reliability of cheap fossil-based feedstock makes the transition to bio-based production more challenging in terms of an economic aspect.
- *Insufficient regulatory framework*: Creates investor uncertainty, forms barriers to market access (i.e., lack of coherent definitions and standards) and favours fossil-based resources over bio-based solutions due to their increased cost competitiveness.
- *Global competition*: Major global players like the US and China are now beginning to see the sector as a strategic priority and facilitating access to markets and finance. Europe needs to maintain its leadership in this sector by commercialising its R&I achievements.
- *Deployment of bio-based solutions at the regional level*: Need for increased collaboration at different levels (regional, national and EU) and all actors along the value chain (primary producers, academia and research, industry) to create regional plans for the adoption of bio-based solutions.

Recommendations to address these challenges:

- *Private sector*: Invest in compelling storytelling and a strong science-based narrative to connect with citizens and policymakers; increase collaboration on communication strategies; engage more primary producers in the value chain, beyond the provision of biomass; highlight the role of regions as essential parts of the bioeconomy's value chain from the outset.
- *Public sector*: Provide a coherent and enabling regulatory framework with bold ambitions and binding targets; support the creation of business models that focus on innovation and circularity; conduct educational programmes for citizens; establish an EU bioeconomy day/week; promote increased integration of the bioeconomy in smart specialisation strategies; facilitate networking platforms which encourage knowledge sharing and best practices; allocate funding for regional initiatives.

How to facilitate access to finance to scale up circular bio-based production in Europe?

CBESF23 participants identified the following **challenges**:

- *Capital-intensive sector*: The bio-based sector requires significant funding due to its capital-intensive nature, with identified "valleys of death" in technological and market/regulatory aspects.
- *Access to funding*: Limited and insufficient risk mitigation mechanisms in place. Financing for replication remains a challenge despite technology having been proven through "*first-of-their-kind*" biorefineries.
- *Lack of competitiveness*: Bio-based product prices are often higher compared to fossil-based alternatives, impacting consumer demand. Unlevel playing field with fossil-based counterparts; consumer expectations that all externalities (i.e., environmental, sustainable, local, etc.) are included in the product price.
- *Authorisation processes*: The process takes longer in the EU compared to other regions impacting the speed of innovation and market entry; risk that commercialisation happens outside of the EU.

Recommendations to address these challenges:

- *Private sector*: Collaborate with financial institutions for tailored funding schemes; focus on innovation for cost reduction; diversify product portfolios (speciality and intermediary products); advocate for streamlined regulations; develop a common strategy for investors to understand the sector's diversity and potential. Invest in capacity building and the right expertise (i.e., legal, marketing, engineering, etc.) to turn ideas into bankable projects.
- *Public sector*: Ensure a predictable regulatory framework that directs investment to the sector; offer tax incentives to encourage industry to transition to greener industrial processes; support cost competitiveness through grants; streamline and accelerate authorisation processes; create regulatory sandboxes, conduct educational programmes for investors, and support the impact of public-private partnership funding model as a seal of excellence.

What R&I is needed to keep the European leadership in bio-based sector in the medium-long term?

CBESF23 participants identified the following **challenges**:

- *Research and innovation diversification*: Identifying key R&I priorities that go beyond replacing fossil-based products, focusing on circularity, resource efficiency, holistic approaches, and considering environmental, social, and economic impacts.
- *Collaboration and knowledge sharing*: Such collaboration is crucial among all bio-based sector's stakeholders at all levels (regional, national and EU) but also at an international level to advance a sustainable bioeconomy. There is a need to foster increased collaboration between the public and private sector as well as industry and academia.
- *Public-private collaboration* and alternative funding sources are necessary to keep Europe's R&I leadership in the bio-based sector.
- *Skills development and retention*: The sector needs to invest in skills development, uptraining and retention to avoid innovation stagnation and impacting companies' competitiveness.

Recommendations to address these challenges:

- *Private sector*: Foster interdisciplinary collaborations; establish collaboration platforms; invest in continuous learning; ensure transparency in value chains; and engage in public-private partnerships.
- *Public sector*: Establish funding schemes that encourage R&I projects focusing on holistic bio-based solutions; create frameworks for regional collaboration; develop skill development initiatives and offer training programmes and incentives to attract and retain talent within the sector; support educational institutions to adapt curricula to include emerging fields relevant to the bio-based sectors future demands; and keep the public-private partnership model to leverage public funding for policy priorities.