EUROPEAN CLUSTER COLLABORATION PLATFORM

Bio-based products: The key to climate neutrality?

Summary

EU Clusters Talks
7 September 2022, 8:30 – 9:30 CEST

An initiative of the European Union

EU Clusters Talk "Bio-based products: The key to climate neutrality?"

The European Cluster Collaboration Platform organised this EU Clusters Talk on 7 September 2022, 8:30 – 9:30 CEST, to discuss good examples and the potential of bio-based materials and products for the green transition as well as challenges for the industry to implement solutions and boost innovation.

Agenda of the meeting

Moderation: Zivile Kropaite

1. News from the European Cluster Collaboration Platform
2. From Our Own Correspondent: *Bio and Circular Cluster, Finland*
3. EU Bioeconomy strategy: Progress report
   Maarit Nyman, Senior Expert, 'Bioeconomy, Chemicals & Cosmetics', Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW), European Commission
4. Panel debate
   Bérénice Kimpe, EU project manager, competitiveness cluster Xylofutur
   Katarína Blicklingová, Director, Bioeconomy Cluster
   Marta Macías Aragonés, Consultant, Technological Corporation of Andalusia (CTA)
   Samuele Ambrosetti, Innovation & Programming, Bio-based Industries Consortium (BIC)
5. Funding opportunities

Key messages:

- Bioeconomy is very cross-sectoral. We need the good ongoing collaboration and exchange of best practices among stakeholders and authorities on regional, national, and European level.
- There is great potential of bio-based materials and products to find solutions to the current challenges. At the same time, we need to keep the balance between exploitation and protection of natural resources.
- Bio-related sectors face difficulties in attracting talent, especially the younger generation. Start-ups can be open doors to employ younger people and to increase green jobs.
- Public and private investment in bioeconomy has increased, but more funding is needed for research and innovation actions. One possibility would be to have specific wood-related calls.
- Awareness and consumer education can play an important role in the success of bio-based products, as the clients need to be satisfied with the products.
- Regulatory barriers in the definition of waste can prevent the exploitation of the residues. We need new performance and evidence-based standards, as most legislations do not reflect the current state-of-play.
- Bio-based products are more expensive due to their shorter history and less-optimised production lines. Consumers need financial incentives, for example different tax treatments.

1. News from the European Cluster Collaboration Platform

Nina Hoppmann, team member of the European Cluster Collaboration Platform

After the introduction by moderator Zivile Kropaite, the following news items were presented:

1. Invitation to the European Cluster Conference and ECCP Matchmaking Event in Prague, Czech Republic, on 26-27 September 2022.
2. Call for expression of interest to host the 2-day in person training sessions of the first Cluster Booster Academy. Deadline to apply is 16 September 2022.
3. Call for expression of interest to host one of the 13 next "Clusters meet Regions" events in 2022 and 2023. Deadline to apply is 15 September 2022.
4. Invitation to reply to the survey "A Solutions-Oriented Approach to Supply Chain Disruptions" with ideas to address supply chain disruptions until 19 September 2022.
5. Launch of the 30 Euroclusters on 1 September 2022.

2. From Our Own Correspondent

Bio and Circular Cluster, Finland

The Bio and Circular Cluster supports its members by bringing technologies, research, and innovations. In their greenhouses, they work on new types of soil improvers and circular fertilisers. They are made from side streams of their company members. Cluster manager Haari Auvinen highlighted that their technologies have huge potential for international scale-up. They are partners in the HOOP project, hub of circular cities to foster investments for the valorisation of urban biowaste and wastewater. The cluster is also researching sustainable solutions to produce biohydrogen in their laboratory.

3. EU Bioeconomy strategy: Progress report

Maarit Nyman, Senior Expert, 'Bioeconomy, Chemicals & Cosmetics', Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW), European Commission

Maarit Nyman put the topic of this EU Clusters Talk into the broader bioeconomy policy context. The European Commission adopted the first bioeconomy strategy in 2012, and it was revised in 2018. The definition of bioeconomy used in the strategy is very broad; it encompasses all the sectors and associated services that produce, use, process, distribute or consume biological resources. Both the strategy and the different actions proposed by the European Commission cover the three dimensions of sustainability: environmental, economic, and societal. Maarit Nyman highlighted that bioeconomy is very cross-sectoral and that the Commission is working to ensure coherence of different EU policies with bioeconomy strategy objectives.

The bioeconomy strategy has five objectives: food security, managing national resources, reducing dependence on non-renewable resources, climate change, and strengthening competitiveness and job creation. Maarit Nyman described bioeconomy as a major enabler of the green transition and the Green Deal. DG GROW is implementing the Green Deal from the industry point of view, working on creating the best possible conditions for the industry to move away from fossil resources across all the industrial ecosystems.

In the progress report published in June 2022, the Commission assessed the implementation of the strategy, concluding that different types of bio-based solutions have been successfully developed through research and innovation. Furthermore, the public and private investment in bioeconomy has

increased, for which the Circular Europe Bio-based Joint Undertaking plays a key role. Now, there is also a specific European Bioeconomy Circular Fund to finance new projects.

She highlighted that there is a good ongoing collaboration and exchange of best practices between authorities on regional, national, and European level, and that the policymakers have an increased understanding of the ecological limits. However, there is still potential for progress and challenges remain e.g., with regards to managing the demands on land and biomass, and the availability of skills. In addition, we need to think about sustainable consumption models and their promotion.

4. Panel debate

Before the beginning of the discussion, the four panellists introduced themselves and their organisations:

Bérénice Kimpe, EU project manager, competitiveness cluster Xylofutur

Xylofutur is a French innovation cluster for the forest-based sector. They bring together around 300 members from the entire wood value chain, from the management of the resources to the wood processing industries and applications.

Katarína Blicklingová, Director, Bioeconomy Cluster

The cluster was established in 2015, joins over 100 triple helix partners, and focusses on agri-food and bio-based solutions. They are very active and well established on EU, national, and macro-regional level in various projects and programmes. They collaborate with the Slovak Ministry of Agriculture and Rural Development to initiate a national bioeconomy strategy.

Marta Macías Aragonés, Consultant, Technological Corporation of Andalusia (CTA)

CTA is a multi-sectoral innovation cluster and provides private funds to Andalusian companies for innovation projects when collaborating with a university, thus boosting the knowledge transfer from research to industry. Furthermore, they provide consultancy services to the market.

Samuele Ambrosetti, Innovation & Programming, Bio-based Industries Consortium (BIC)

The Brussels-based European organisation connects industry, academia, regions, and citizens to transform bio-based feedstocks into sustainable products and applications. They cover all bio-based economy sectors from primary production to the end users. They act as the private partner of the European Commission in the Circular Europe Bio-based Joint Undertaking, which finances both small research projects and large pilot and flagship plans.

Open Dialogue

The panellists agree on the **great potential** of bio-based materials and products, which is nearly everywhere, to solve the current challenges we face. They shared the following **examples to illustrate existing solutions**:

- Wood residues to replace fossil fuels in the production of bio-based oil, which can be used for heating purposes or for the production of energy
- Bio-fertilisers to replace chemical fertilisers
- Isolating panels made from biomass in the construction sector
- AFTER-BIOCHEM, a French flagship plant to produce organic acids, fertilisers, and soil improvers from the core products of the existing regional value chains

Bérénice Kimpe underlined that when thinking about bio-based solutions, we need to keep in mind the **balance between the exploitation** of wood as a natural resource and the **protection** of the forests.

All panellists spoke about the need for **investments** to do research and innovation projects. Bérénice Kimpe suggested to make specific calls for wood-based solutions. Maarit Nyman agreed on the importance of investments and spoke about the mobilisation of EU funds and other funding sources.

Talking about **skills**, the panellists expressed that it has been very difficult to recruit people in the past years, especially in the rather traditional forest-based and agriculture sectors. Despite being very innovative, the "old-fashioned" image of the sectors is a barrier to the attraction of young talent. Skills are needed for example in the forest exploitation and digital transition. Universities and engineering schools for wood sciences are working with Xylofutur on this issue.

Marta Macías Aragonés highlighted that **start-ups** play a very big role in bio-based solutions, and that they can build the bridge to the young people. CTA is working with the local university to initiate start-ups, e.g., related to vertical farming. Furthermore, CTA has a programme to map the capacities that academia is building and needs of the industry. Xylofutur is also using start-ups to attract young people. They have a specific network of start-ups to make the sector more attractive, especially with the objective of creating new green jobs. Maarit Nyman agreed that **awareness** –raising should be a priority across the different activities. The EU has set up a network of young bioeconomy ambassadors who will reach out to different stakeholders, e.g. young people and raise awareness on bioeconomy. The Commission organises a Conference on Bioeconomy on 6-7 October 2022, in which they involve the young ambassadors.

Marta Macías Aragonés saw the main challenges at the **beginning,** for example in biomass localisation and mobilisation, and at the **end of the value chains**, for example in consumer satisfaction or knowledge gaps about regulations for bio-coatings. Raising awareness and **consumer education** are important tasks for being successful in the transition. CTA works with brand owners on how to **communicate** the benefits of bio-based products to their clients, as there is a need to use another kind of language when targeting consumers and communicating environmental sustainability concepts.

Samuele Ambrosetti explained **regulatory barriers in the definition of waste**. Taking the example of local legislations in Italy, if a product is labelled as waste, it is not allowed to be re-used. Therefore, livestock residues can only be re-used within the farm gates. He stressed that we need new **performance and evidence-based standards**, as most legislations were in place before bioeconomy became popular and are therefore not reflecting the current state-of-play.

Regarding **circular economy**, most of the bio-based materials are circular by nature if they are managed sustainably. In the forest-based sector, nearly all wood residues can be re-used, so it has a strong circular component. In the last years, the re-use and recycling concept has been deeply integrated into the way of thinking of many companies. For Katarína Blicklingová, there is an intersection between bioeconomy and circular economy, e.g., you can substitute carbon-intensive products like plastics or concrete with low-carbon alternatives, e.g., nano-cellulose. However, we still need to more examples and raising awareness about the existing alternatives so that companies can make their production more circular.

Speaking about the **life cycle cost analysis**, which is an important reasoning for Samuele Ambrosetti, he explained that many fossil-based mass-consumed products like plastics have been around for a long time and are optimised, which is why they are low-cost materials. Bio-based materials have a shorter history, and their value chains are not as optimised. Therefore, the product is more expensive, which in turn has an impact on B2B and B2C. In this period of economic crisis, consumers might be less willing to spend more, as they might have fewer resources. For the transition, the costumers would rather need a **financial incentive** to favour bio-based products, for examples, with the help of a different tax treatment. Marta Macías Aragonés added that CTA is working to determine the most effective incentives for brand owners to make the transition from fossil-based to bio-based products.

In addition, Samuele Ambrosetti raised the issue that bio-based and fossil-based products fall under the same category in the **NACE classification** of economic activity.

Regarding the **collaboration with Ukrainian partners** on this topic, Samuele Ambrosetti explained that Europe has made it easier to participate in projects under the Horizon programme.

5. Funding opportunities to strengthen resilience

Nina Hoppmann, team member of the European Cluster Collaboration Platform

Closing the EU Clusters Talk, Nina Hoppmann presented the following funding opportunities:

From the European Commission:

1. CBE JU will welcome project proposals across 12 topics for Innovation Actions, Flagships, Research and Innovation Actions, and Coordination and Support Actions with a total indicative budget of €120 million. Deadline to apply is 22 September 2022.
2. Best international practice for scaling up sustainable biofuels: Projects will aim at fostering international cooperation to develop best practices and concepts along the entire value chain for accelerating the scale-up of sustainable biofuels worldwide. Deadline to apply is 10 January 2023.

Technical assistance:

1. Covenant of Companies for Climate and Energy: Call for Technical Assistance in auditing businesses' energy usage, defining and implementing science-based targets for emissions reduction, and identifying technologies, methods, and financing mechanisms. Deadline to apply is 30 September 2022.