

# BIO east

## FORESIGHT CONFERENCE

**Climate-neutral future depends on sustainable bioeconomies**



*High-level foresight conference on positioning sustainable and circular bioeconomies in Central and Eastern Europe to achieve climate neutrality by 2050*

**27 September 2021**

**Online event**

## Conclusions

7 October 2021

On 27 September 2021, under the auspices of the Slovenian Presidency of the Council of the EU and the Hungarian Presidency of the Visegrád Group, a high-level BIOEAST Foresight Conference on positioning sustainable and circular bioeconomies in Central and Eastern Europe to achieve climate neutrality by 2050 was organised. The online event was attended by almost 190 participants from EU Members States and other countries. The title of the conference conveys the main message “A climate-neutral future depends on sustainable bioeconomies”. Without the sustainable and circular use of available biological resources, we will not achieve the global goals set for our society. Therefore, the role of strategic thinking in biomass valorisation is crucial for every country. Key policies, including agri-food, industrial and energy policies, need to be radically changed to be in line with the green transition. Biomass undoubtedly has a central role to play in replacing the fossil fuel-based economy.

Speakers at the conference highlighted key points and in particular urged policymakers to focus on investing in national education, research, innovation, and development programmes related to the bioeconomy. They highlighted the results and recommendations of various policy support actions. The main objective of these actions is to help countries, especially in Central and Eastern Europe, that lack national bioeconomy strategies and action plans. Different sectors, such as food or energy, have specific interests in the valorisation of primary biomass, but without long-term strategic thinking and overarching policy objectives, the sustainable supply and processing of biomass will be questionable.

The European Commission supports BIOEAST governments in the sustainable and circular valorisation of biomass valorisation by providing policy support. Two exercises have been carried out to help governments in the medium and long term. On the one hand, the Bioeconomy Policy Support Facility has carried out a mutual learning exercise between countries that already have bioeconomy strategies and action plans in place and those that are still developing them. On the other hand, a group of experts conducted a 2050 foresight exercise to identify scenarios from business-as-usual to a fully-fledged bioeconomy to help policy makers understand why it is important to invest in the bioeconomy.

### Recommendations from the BIOEAST Foresight Report

Both exercises were mainly carried out by experts from the BIOEAST macro-region. The recommendations are simple: the linear bioeconomy plays an important role in all 11 BIOEAST countries, and it is therefore important to develop and invest in new business models where the bioeconomy is not only based on primary products, but also on higher value-added bio-based solutions that replace fossil equivalents. In addition, networks of experts and policy makers need to be further developed. There is a range of market actors that need to be listened to and enabled to engage in the innovative new business models.

The experts who prepared the BIOEAST Foresight Report stressed that we need a specific education system for the bioeconomy and that we need to bridge the innovation gap by strengthening civil society, good governance and the development of national bioeconomy strategies and research agendas in the



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BIOEAST countries. Furthermore, attracting private investors and entrepreneurs and fostering cooperation within countries and across the macro-region are key.

The BIOEAST Advisory Council reinforced the recommendations of experts. Reflecting on the findings of the Foresight Report, 19 high-level experts coming from different fields and backgrounds underlined that this transition is timely as it complements the EU's ambitious roadmap. The BIOEAST countries should agree on a clear understanding/definition of a sustainable circular bioeconomy, which should be given greater political weight and be seen as an essential tool for a sustainable transition.

**In their response, the BIOEAST public administrations, the ministerial experts, have developed a common position, endorsed by 11 BIOEAST agriculture ministries, on raising awareness of the importance of investing in specific research and innovation programmes and in a national bioeconomy development programme. Furthermore, it is important to strengthen BIOEAST as a good initiative for the establishment of thematic networks within the BIOEAST macro-region and as a gateway to wider European networks in this field.**

Seven thematic areas, which are key for the macro-region, have been addressed in detail in the foresight exercise.

### **Agroecology and Sustainable Yields**

In the area of agroecology, conference participants expressed that sustainable agriculture and agri-food systems need more attention in the future to protect soils and reduce the use of chemical pesticides. An effective agroecological system would restore ecosystem services and biodiversity. Ecosystem services can increase productivity, but we need knowledge tailored to the context. Many good practices and examples are already available; Member States just need to learn how to use them properly. We need a transformation to achieve sustainable goals where systematic adaptation of agro-ecological practices could reduce the pressure on intensive agriculture.

### **Food Systems**

In this thematic meeting, participants discussed the future challenges and needs for the development of sustainable food systems in the CEE countries in the context of the different scenarios presented in the BIOEAST Foresight Report. The current transformation of food systems creates a number of challenges that require an appropriate and effective response at global, national and local levels. The results of the BIOEAST Foresight and the work of the BIOEAST Thematic Working Group on Food Systems should be one of the important elements used in the co-creation process for the establishment of European partnerships. Particular attention should be paid by the administrative, research and innovation sectors to promoting good practices that are relevant to achieving the objectives of the Farm to Fork Strategy and the Biodiversity Strategy.



### Forestry Value Chain

Forests cover around 35% of the total European territory and are an important renewable source of forest products and the many services provided by forests, contributing to the bioeconomy of our countries. Europe's goal is to become climate neutral by 2050, where the use of wood products can substitute non-renewable materials, especially in the construction sector. The reuse of renewable materials can further contribute to sustainability and circularity. Forest ecosystem services and non-timber forest products also play an essential role. However, the challenge remains how to balance the economic, social and environmental functions of forests in the context of changing environmental conditions and societal demands. Current trends in the forest sector are identified as sustainability, digitalisation, interdisciplinarity, social sciences, creativity and innovative industries. The key to success lies in collaboration with researchers, industry, policy makers and the public.

### Fresh Water Value Chain

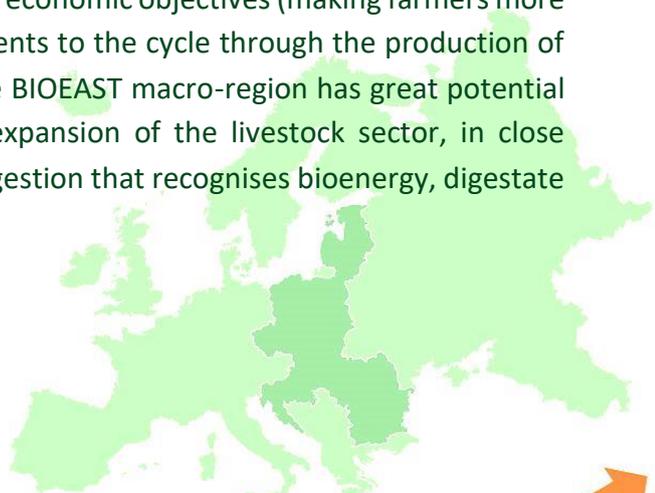
The BIOEAST Initiative can integrate agriculture/forestry/aquaculture into the circular bioeconomy, using precision agriculture to find better solutions and forms of nutrient inputs. Precision agriculture can have an appropriate impact on the water, carbon and nutrient cycles to increase efficiency. CAP funds can accelerate the implementation of new technologies if the government targets the funds in the right way. A deeper cooperation between the research community and local farmers (private sector) is needed to establish digital agriculture together with good practices. Participation in EU-funded projects, assisted by national administrations dealing with supporting policies, is essential. To accelerate the modernisation of agriculture, training and advisory services should be strengthened. Science must be involved to ensure that global solutions are not only partially implemented in practice. In addition, knowledge needs to be transferred vertically and horizontally – good farmers need to be highlighted and helped to share their practices with others.

### Bioenergy and New Value Added Products

Farmers need help to find innovative solutions and the national research and innovation system needs to foster links with the real sector. Only by working together can livestock farmers and researchers find sustainable innovative solutions to limit methane emissions from the livestock sector, where societal objectives (reducing greenhouse gas emissions) overlap with economic objectives (making farmers more competitive) and environmental objectives (returning nutrients to the cycle through the production of organic fertilisers from anaerobic digestion of manure). The BIOEAST macro-region has great potential for sustainable and climate-neutral growth through the expansion of the livestock sector, in close connection with a tailored support scheme for anaerobic digestion that recognises bioenergy, digestate and greenhouse gas savings from manure.



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### Advanced Bio-Based Chemicals and Materials

The session on advanced bio-based chemicals and materials focused on the role of new, innovative materials in achieving the 2050 carbon neutrality target. The essence of the bioeconomy is to replace “old carbon”, which has been built up over millions of years, with organic and renewable “new carbon” within a timeframe of one to ten years. Renewable carbon comes from living systems in a natural environment that is in balance with the atmosphere. BIOEAST countries have large quantities and high densities of agricultural and forestry residues, and in some areas existing bio-based industries could support the development of biorefineries. The main drivers today are EU legislation, e.g. the European Green Deal, government support for research and development, and the need to reduce dependence on fossil fuels. Policy and regulation are essential to address the large gap between the willingness of the market to pay and the cost of supplying chemicals and materials that deliver environmental benefits; they need to be developed and implemented over the next five years to influence uptake by 2030. Support for research, development and demonstration and feedstock supply can help to accelerate cost reductions and achieve carbon neutrality targets, and requires global cooperation and thinking.

### Education and Skills

As the number of people working in the bioeconomy grows in Europe, a different approach to education and training programmes is needed. A modern education programme should include specific disciplines and expertise and be tailored to the specificities of the different target groups being trained. A good option would be a network of universities, probably regionally oriented, which would focus more on the specific needs, priorities and requirements of the region. This would educate local workers and provide solutions to local problems. There is also a need for closer cooperation between academia and the private sector.

**After two years of joint research and efforts, experts from academia and public administration have highlighted an urgent policy priority: “A climate-neutral future depends on sustainable bioeconomies”. The transition to a circular and sustainable bioeconomy in the BIOEAST countries must be a political priority to enable bio-based sectors to create bio-based products and services with higher added value.**

The BIOEAST Foresight Report, conference speeches, presentations, reports as well as position and reflection papers discussed at the conference are available in the [MiTeam Library](#) and on the [BIOEAST website](#).

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