REFLECTIONS OF THE BIOEAST ADVISORY COUNCIL

on the BIOEAST Foresight Report

August 2021

Reflection Paper

BIOEAST.EU

BIOEAST Foresight Exercises Reflection Paper

Sustainable Bioeconomies towards 2050

Background

The Central-Eastern European Initiative for Knowledge-based Agriculture, Aquaculture and Forestry in the Bioeconomy1 – BIOEAST – offers a common political commitment and shared strategic research and innovation framework for working towards circular bioeconomies in the Central and Eastern European (CEE) countries. Through the BIOEAST Initiative, the 11 countries set the vision for 2030 to develop knowledge and cooperation-based circular bioeconomies, which help to enhance their inclusive growth and to create new value-added jobs, especially in rural areas, also strengthening environmental sustainability.

The BIOEAST Foresight report provides four scenarios for the sustainable circular bioeconomy, which could be applicable in the BIOEAST region in a 30-year perspective (see Box 1). The scenarios demonstrate possible development outcomes of the BIOEAST region within the EU´s efforts towards climate-neutrality by 2050.

BIOEAST foresight report scenarios

Scenario 1: A fully thriving circular bioeconomy
- Bioeconomy principles have been adopted at all levels of societal structure
- Circularity principles and sustainable operations have been implemented at all levels
- The use of natural resources is dominated by the principles of sustainability
- The general public and related stakeholders are significant actors in the development of this scenario

Scenario 2: A linear bioeconomy
- Society is operating in a conventional way adopting linear practices and aiming for the maximization of turnover and revenue
- Development is based on fossil-based energy use with a negative impact on the environment, limited adaptations in the bioeconomy are mostly related to the administrative and infrastructure levels
- The use of natural resources is quite exhaustive and lacks even the basic elements of sustainability
- Full support by the public

Scenario 3: Business as usual
- Society is operating in a conventional way adopting linear practices and aiming for the maximization of turnover and revenue
- Development uses fossil-based energy with a negative impact on the environment
- The use of natural resources is quite exhaustive and lacks even the basic elements of sustainability
- On the surface, there is a consensus, but several indicators are signalling that there is major disagreement

Scenario 4: A non-profit circular bioeconomy
- Society is entering a compromise state, with basic societal standards becoming adaptable to new priorities and business models, while environmental standards and sustainability are not open to compromise
- Sustainability is the basic priority for all environmental standards and is not affected by various business models or sectoral priorities
- The use of natural resources is calculated following sustainability principles
- The public have adopted sustainability goals and principles and are not only supportive, but also proactive in setting new sustainable standards

This document provides the reflections of the BIOEAST Advisory Council (AC)[2] in relation to the BIOEAST Foresight Report.

[1] https://bioeast.eu

[2] The BIOEAST Advisory Council (AC) is a body of the BIOEAST Initiative. The AC provides guidance to national policy makers and identifies special challenges the macro-region might be faced with. Its ultimate aim is to contribute to the BIOEAST Strategic Research and Innovation Agenda (SRIA). The Advisory Council is composed of different bioeconomy-related areas who were nominated by the BIOEAST Board.

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Our view

Climate change, the global loss of biodiversity and other related impacts are posing unprecedented challenges to our societies. These challenges cannot be solved with a business-as-usual approach but require us to completely rethink our relationship with nature and the way our socio-economic system works. Part of the solution is the transformation of our current economic model towards a climate- and nature-positive economic model, a **sustainable circular bioeconomy** model[3]. Moving towards such an economic model does not only mean replacing fossil energy with renewable energy, it also means moving in a sustainable way towards fossil-free materials and substituting carbon-intense products with bio-based alternatives, whenever possible and efficient to do so.

This transformation will not only help us cope with pressing climate change impacts, but should also be seen as a path to overcome the disastrous social and economic impacts of the COVID-19 pandemic. The core issue is finding holistic approaches to make more effective and efficient use of available and potential natural resources without causing environmental degradation.

In this context, the AC is of the opinion that the BIOEAST Foresight report is of immense importance as it provides policy makers, stakeholders and other interested parties with pathways (scenarios) towards a more sustainable future for the BIOEAST region and highlights the key elements of such a transition. It also highlights that this transition will not only benefit the BIOEAST region, but the EU as a whole. This transition is also timely, as it complements the EU´s ambitious plans (The European Green Deal) and concrete measures (Fit for 55' - delivering the EU's 2030 climate target on the way to climate neutrality) to become the first carbon-neutral economy, which is based on decoupling economic growth from resource degradation and inclusiveness (nobody left behind).

However, transforming the existing economic system is a challenging task, as it requires that we overcome long-established behaviour patterns in all segments of our society. Thus, we need to highlight that a transformation towards a sustainable circular bioeconomy can only be successful if it is based on at least the following principles, which are also highlighted in the BIOEAST Foresight report:

- **Connecting circular and bioeconomy in a sustainable way** – The concepts of circular economy and bioeconomy are often considered separately and in relation to different sectors. However, to efficiently tackle the above-mentioned challenges they need to be considered as part of the same solution. While bio-based resources are renewable and present a viable alternative to replace fossil-based solutions, they are not infinite. Thus, we need to manage and use them in a sustainable and efficient way, by extending the life cycles of products, including the efficient use of by-products and waste. This also requires accepting (bio)waste as a viable resource for producing new value-added products. The shift in mindset and practice must be complemented by modernizing production processes to respect safe ecological limits, and technologies to minimize generating waste.
  AC Advice: BIOEAST countries should find/agree on a clear understanding/definition of a sustainable circular bioeconomy, to be implemented in the context of the European Green Deal and similar initiatives.

[3] For more details see also the EU Bioeconomy Strategy: https://ec.europa.eu/info/research-and-innovation/research-area/environment/bioeconomy/bioeconomy-strategy_en

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- **System approach** – changing to a new economic system is a complex task, with many closely interconnected components. There needs to be broad consensus among the different institutions and stakeholders on the common objectives and close collaboration in the implementation of activities. The BIOEAST Foresight report has developed an institutional model for collaboration and innovation, which includes knowledge and collaboration exchange horizontally and vertically across the entire institutional system. Its guiding principles are connections and collaboration that can lead to synergistic knowledge exchange, efficient financial flows, and policies.
  AC Advice: BIOEAST countries should aim to set the transition to a sustainable circular bioeconomy as an overarching objective and strengthen inter-institutional collaboration.

- **Multi-level governance systems and long-term support mechanisms (enabling conditions) for development and growth** – Any major changes to a socio-economic system need to be supported by an adequate system of governance and support measures at different levels. The governance system should on the one hand create a positive environment for the implementation of new value chains and business models, while on the other it should enable the creation of synergies by connecting different economic actors (e.g. research, business, public bodies). Given a transition to a new economic model does not happen overnight, it is important that any solutions are applied with a long-term vision and aim to secure a stable business environment. A prerequisite for reaching this mutual benefit is the existence of a governance body that leads, directs and facilitates the transformation process. Securing support (funding) for collaborative platforms that co-create and transfer know-how to cope with the challenges of transitioning to a sustainable circular bioeconomy is equally important.
  AC Advice: BIOEAST countries should aim to assign a higher political importance to a sustainable circular bioeconomy, and should view it as a necessary tool for a sustainable transition.

- **Knowledge, innovation and capacity building at multiple levels** – a sustainable circular bioeconomy requires a move from the business-as-usual model towards new, innovative solutions in all segments of the economic system (e.g. primary production and biomass transformation, food and biobased products, business and market models, consumption, governance). It is a knowledge-intensive transformation. It requires the creation of new knowledge and infrastructures (i.e. investments in research and innovation), building capacities (i.e. investment in education at multiple levels) and adequate monitoring mechanisms to check the progress of the process. Above all, it is important that stakeholders themselves recognize the importance and benefits of research and innovation.
  AC Advice: BIOEAST countries should focus on understanding and better utilizing their sustainable circular bioeconomy potential and possible development paths by generating more reliable data and improving the knowledge base in all segments of the ecological, economic and social system.

- **Broad social dialogue (inclusiveness) and education** – Lastly and most importantly, to succeed with the transition it is crucial that it is based on a strong involvement and support of all social groups. Raising awareness, capacity building, co-design, open dialogue, communication and dissemination are not only trendy keywords, but an essential element of successfully implementing a sustainable circular bioeconomy. The broad inclusion of citizens is crucial in all stages of the process, as bottom-up initiatives will ultimately determine its success. Even if the rest

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of the preconditions are fulfilled (see above), this will not be sufficient without broad public acceptance, as we all need to change our way of acting.

AC Advice: BIOEAST countries should focus on fostering stronger public dialogue, capacity building and cooperation around the sustainable circular bioeconomy, with a clearly defined and understood concept that gains public acceptance and support.

To conclude, it is our view, that the BIOEAST region has the necessary capacities and resources to master a transition towards a sustainable circular bioeconomy. However, in our view, up to now, these have not been utilized to their fullest possible extent and we perceive that the region is lagging behind when compared to some other parts of the EU. It is important to consider that a transition towards a sustainable circular bioeconomy is not a question of political orientation, but rather a common goal to be supported by all to ensure the sustainability, competitiveness and attractiveness of the BIOEAST region in the EU for current and future generations.

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