



Bio-based strategies and roadmaps for enhanced rural and regional development in the EU



## Exploring the bioeconomy as a central pillar of regional recovery plans during and after COVID-19

Proceedings from the BE-Rural Mid-Term Conference

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## KEY MESSAGES

This document summarises the presentations and discussions during BE-Rural's Mid-Term Conference. The following key messages have emerged from the discussions:

- Restrictive policy measures that have been implemented to contain the COVID-19 pandemic have led to adverse economic impacts across European regions. As far as the national recovery plans are concerned that have been designed to counteract these impacts, details on the sustainability elements in the plans are limited, and bioeconomy concepts seem to be entirely absent at this stage.
- Bio-based business models and value chains are characterised by complexity – adjusting them in view of the pandemic might take time and require political support. National and regional recovery plans could be appropriate instruments to support the necessary adjustments.
- Positive side effects of the pandemic can be observed that might help to strengthen regional bioeconomies, including an increased demand of recreational opportunities provided by rural ecosystems, an increased demand for locally produced goods, and an increased interest for and awareness of the local market.
- Positive examples of how local and regional economies have realigned under the current adverse circumstances validate the importance of thinking differently, from a solutions perspective, considering different stakeholders and enabling collaboration via education, credibility and funding.
- The pandemic offers an opportunity to trigger systemic change on many levels. If contradictory policy goals are better understood and addressed, there is meaningful potential for system change towards sustainability, particularly in the wider context of the European Green Deal.
- The COVID-19 crisis also has shown that sometimes reality moves faster than plans and strategies. This creates a disconnect that can subsequently lead to disappointment and slow progress even further. The lesson calls for action towards accelerating the understanding and appreciation of the bioeconomy and its guiding principles, which would allow better informed and more determined decision-making.
- Co-creation, openness and inclusiveness, and sustainability should be considered key principles when designing bioeconomy strategies in the context of recovery plans and beyond:
  - Co-creation of bioeconomy strategies and roadmaps is a time-intensive process and building trust among stakeholders is essential for the success of the approach. However, the development of bioeconomy strategies in a participatory manner gives the credibility for their implementation.
  - Openness and inclusiveness of strategy development processes is a crucial aspect when it comes to the further development of the European bioeconomy. Particularly at the regional level, the involvement of actors who are not among the 'usual suspects' should be promoted.
  - Local and regional bioeconomy strategies need to address sustainability aspects, particularly the sustainable use of agricultural, forest and marine ecosystems. In this context, the Rural Development Programmes (RDPs), especially the EU LEADER tool, can play a role.
- While a number of support mechanisms are already in place (e.g. through BBI JU) that can help the agricultural sector to develop and take up bio-based innovations and ensure added value, primary producers must engage more actively in discussions on the potentials (and obstacles) of the bioeconomy in rural areas.
- Even though scaling-up of bio-based processes is often a prerequisite for economically viable business models, the local and regional level provides sufficient opportunities to realise economies of scale and thus to establish fertile bio-based value chains.

## 1 Introduction

On 8 September 2020, BE-Rural's Mid-Term Conference took place under the title "Exploring the bioeconomy as a central pillar of regional recovery plans during and after COVID-19". The objective of the online event was to explore the extent to which the implementation of a bioeconomy concept can leverage the reactivation of regional economies across Europe. Through short expert talks, virtual breakout groups, and a panel discussion with participation of the audience, the conference aimed at answering the following questions (for details, see [conference agenda](#)):

- How is the current crisis an opportunity to trigger systemic change?
- Who is already incorporating the bioeconomy concept into their recovery plans and actions?
- How do (short term) recovery plans fit with bioeconomy strategies (which have a longer term vision)?
- How resilient is our current notion of the EU bioeconomy, and can it help us navigate future crises?

The conference was attended by approximately [80 bioeconomy stakeholders](#) from across Europe, mainly representing public sector organisations, research organisations and consultancies. In addition, regional networks and cluster organisations as well as regional business associations were represented. Overall, stakeholders from 15 different EU Member States and EU candidate countries participated in the conference.

The individual sessions were moderated by **Gerardo Anzaldúa**, Ecologic Institute.

**Holger Gerdes and Zoritz Kiresiewa**, Ecologic Institute, welcomed the participants and kicked-off the conference with a short [introductory presentation](#). They focussed on the territorial impacts of the COVID-19 pandemic, specifically on the economic impacts of the restrictive policy measures that have been implemented across Europe to contain the pandemic. Looking at the policy responses that have been designed to counteract the apparent economic distortions, they highlighted that while certain EU Member States have already announced their own recovery plans to complement the efforts from the European Union, details on their sustainability elements are limited, and bioeconomy concepts are entirely absent at this stage (for more information, see [background reader](#)). They concluded their presentation by arguing that, in sum, the COVID-19 pandemic presents an opportunity to trigger systematic change on many levels, and that they see an opening to incorporate the bioeconomy into national and regional recovery plans to improve Member States' economic resilience. Finally, they pointed out that co-creation, openness and inclusiveness, and sustainability are key principles of participatory bioeconomy development, which need to be taken into account when designing strategies in the context of recovery plans and beyond.

## 2 The bioeconomy in rural areas: an introduction

In a first session, **Laura Jalasjoki**, European Network for Rural Development (ENRD), provided an introduction to the bioeconomy in rural areas. In her [presentation](#), she focussed on examples for a resilient rural bioeconomy and provided number of good practices where entrepreneurs successfully managed to create value in the local economy by diversifying income, activities and partnerships, thereby contributing to increased resource efficiency. Regarding the question of whether the current crisis is an opportunity to trigger systemic change towards sustainability, Laura Jalasjoki stated that she clearly recognizes the potential for systemic change towards sustainability, particularly in the wider context of the European Green Deal. However, she also pointed out that bio-based business models and value chains are characterised by complexity, and that it will take time for entrepreneurs to make the necessary adjustments.

## 3 How are rural economies faring in the midst of the COVID-19 pandemic?

The session started with a [presentation](#) by **Ian Archer**, Industrial Biotechnology Innovation Centre (IBioIC), which gave insights into new bio-based value chains in Scotland. Focussing on bio-based

manufacturing, he showed the complexity of the value chain and the institutional framework that has been established to support relevant actors in the development and commercialisation of bio-based products and services. Afterwards, **Jens Persson**, Swedish Board of Agriculture, gave a [presentation](#) in which he described the impacts of the COVID-19 pandemic on the Swedish blue bioeconomy. He explained the measures that have been implemented to reduce the negative impact of the pandemic in a short-term perspective, including support for workers who were laid off during the pandemic, support for conversion and adaption of businesses, support for temporary cessation of fishing activities, temporary reduced requirements in environmental legislation related to aquaculture and related to administration, search for new markets and value chains, and rationing of fishery landings as response to reduced demand. He also pointed out that positive side effects of the COVID-19 pandemic can be observed, including an increased demand of ecological services provided by aquatic ecosystems, an increased demand for locally produced goods, and an increased interest for and awareness of the local market. He concluded that cooperation and information exchange are important when it comes to developing effective strategies, and that organisations, platforms and networks are playing key roles in this regard.

## 4 How is the current crisis an opportunity to trigger systemic change towards co-creation, inclusiveness, and sustainability?

In this session, three breakout groups discussed how co-creation, openness and inclusiveness, and sustainability, as key principles of participatory bioeconomy development, can be addressed when designing strategies in the context of recovery plans and beyond:

- **Co-creation**

The goal of the first breakout group was to discuss strengths and limitations of co-creation in the light of the current crisis and to exchange on effective tools to facilitate this form of engagement. All participants appreciated the benefits of the co-creation process (albeit not always recognized under this name) for the development of bioeconomy strategies and agreed that the development of bioeconomy strategies in a participatory manner gives the credibility for their implementation. It was stressed that providing small-scale funding with the aim to keep stakeholders involved and support collaborations could be very beneficial.

In addition, BE-Rural project partners shared their experiences in facilitating co-creation processes in their focal regions. So far, these co-creation processes have targeted diverse type of stakeholders in the different regions – businesses and consumers, local governments, academics, civil society and the public. The regions have utilized several engagement techniques to create the conditions for co-creation:

- Identify and gather the most engaged stakeholders who can serve as proponents for the bioeconomy among their networks (following a “snow-ball” approach).
- Use communication channels and visuals – website and social media channels – to reach to local people/consumers (develop the demand side).
- Switch to online engagement tools in order to keep stakeholder engaged during the COVID-19 lockdown.
- Organise local engagement events.

Overall, the session led to the conclusion that co-creation is a time-intensive process and building trust among the stakeholders is essential for the success of the approach.

- **Openness & Inclusiveness**

The goal of the second breakout group was to discuss how the current crisis an opportunity to trigger systemic change towards openness and inclusiveness. It focused on the question of which actors beyond the usual suspects should be involved in (regional) strategy development processes, and discussed the pros and cons of involving these actors. Overall, the participants agreed that when developing bioeconomy strategies, actors beyond the so-called triple helix – representing science and

academia, businesses, and policy – should be involved in the discussions. Examples from Sweden, Latvia, Romania and Austria were highlighted, where facilitators of strategy development processes successfully managed to engage with actors – from civil society organisations to deprived parts of the local population – who would normally not be involved in a strategy development process. Acknowledging that these actors might bring ideas and concerns to the table which would otherwise remain unheard, it was held that active engagement with these actors, which requires a comprehensive stakeholder mapping exercise and strong communication efforts, is highly resource-intensive and can thus only be achieved within broad strategy development processes.

- **Sustainability**

The goal of the third breakout group was to discuss how to design a bioeconomy that promotes a sustainable use of agricultural, forest and marine ecosystems and especially how current policies could be used to strengthen sustainability aspects, such as environmental sustainability (such as land, natural resources management), social sustainability (e.g. rural and social development, employment), competition and synergies between biomass end-use sectors, food security.

The participants mentioned the importance of inclusion of sustainability in local and regional development strategies, as these build the foundation for development. The Rural Development Programmes (RDPs), especially the **EU LEADER tool**, can play a major role. Furthermore, it was pointed out that it is still unclear how the crisis will influence long term investments, but that a trend towards regionalisation is expected. Regionalisation could trigger the use of waste and side-streams, which could strengthen local and regional bioeconomy players. Participants mentioned that due to the dynamic developments at the moment, strategies are actually lacking behind actual developments. One major question is how the European Green Deal will be included in the recovery plans and how appropriate instruments can be designed.

Participants pointed out that the challenges to transform from a model based on fossil fuels to one based on bio resources is not new. However, the pandemic has highlighted the need to accelerate the process and showed the interdependencies in the system. The complexity of the challenges means that it is important to reach out more to partners.

## 5 What role can the bioeconomy concept play in the green recovery of Europe?

The session started with a **presentation** by **Ana Cuadrado Galvan**, Bio-Based Industries Joint Undertaking (BBI JU), in which she focussed on challenges and opportunities for the farming sector and rural areas. She highlighted the role of BBI JU in supporting the agri-based sector, specifically regarding the integration of new value chains and creation of new cross-sector interconnections, sustainable sourcing of biomass, more efficient processing, production of new bio-based ingredients and products, and overall socio-economic impact. She pointed the participants to a recent study, which analyses the agricultural sector's involvement in the BBI JU portfolio and provides recommendations for improvement (available for download [here](#)). Afterwards, **Joachim Venus**, Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB), gave a **presentation** in which he focussed on process engineering challenges of producing bio-based products. He highlighted that research activities at ATB aim at 'sustainable intensification' of bio-based processes and thereby consider the entire value chain as part of a system's approach, whereas a specific focus is on the valorisation of residues and side streams. He highlighted specific challenges regarding the scaling-up of bioprocesses, but stressed that this needs to be put into perspective: the level of application can be at the local or regional level; large-scale dimensions are not always required or sensible.

## **6 Locking in the recovery: how resilient is our current notion of the EU bioeconomy, and can it help us navigate future crises?**

The final session of the conference was an open panel discussion, in which the five speakers participated. The exchange was on how the concept of the bioeconomy, as currently defined and promoted by the EU, incorporates the notion of resilience and to what extent it could help rural regions bounce back from future crises. It kicked off with a call for revisiting the premise of KBBE (Knowledge-Based Bioeconomy) as a pre-requisite for innovation, and for ensuring that ongoing and future efforts in devising and rolling out bioeconomy strategies and roadmaps are built on previous evidence and experience. The lessons learned from the COVID-19 pandemic in terms of gaps and weak points of our current structures, as well as on effective action to trigger recovery, should guide our ongoing efforts to establish regional bioeconomies. The panellists acknowledged that it is difficult to evaluate how well the bio-based economies of the future, built on the model pursued today, would perform against future disruptions to our social and economic systems. However, expectations are that if indeed the interconnections among bioeconomy stakeholders are properly established, the fundamental principles behind the bioeconomy concept, and specifically its focus on sustainability, represent a solid foundation upon which more nimble, flexible bio-based value chains can be built and driven. This can ultimately help sustain economies and societies that operate in harmony with the natural systems they depend on.

## **7 Wrap-up**

Holger Gerdes and Zoritzia Kiresiewa summarised the main outcomes of the discussions and thanked all participants for attending the conference. A key takeaway from the discussion is that currently there is a high level of political willingness to turn the COVID-19 crisis into an opportunity for a greener and more sustainable economy and society, not only at EU level, but also at national level, which also provides a window of opportunity for the regions. The pandemic confirmed the need to look at local resources, which could increase local security and resilience. Therefore, regions have to define their strategic plans by taking into consideration the availability of local resources. Apart from that, the crisis triggered many social innovations and bottom-up approaches (e.g. food sector, mobility), which could be easily replicated across EU regions.