


O.T4.4.

Opportunities for Rural Development

Biz-up
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1. Summary

This report provides a deeper insight on the outputs of the co-creation workshops country by country, and which main opportunities (in form of projects, project ideas and initiatives) could be drawn from this exercise. It complements thematically some of the work described in the Output T4.3, which is mainly focused on the action plan and the outreach of the activities.

In chapter 2.3 the partners of each country highlights one of the opportunities and linked them to one of the three domains of the project or a combination of them: bioeconomy, rural development and urban-rural cooperation. Following the scheme of OT4.3, the last chapters focus on the transferability of these opportunities to other regions, as well as which target groups may capitalise them.

To sum up, the report gives food for thought and some good ideas for regional and transregional cooperation on bio-based and social innovation, based on what could be drawn from the co-creation workshops. The implementation of some of the identified opportunities could be used to support the revitalisation of rural areas and make them livelier and economically viable.

2. Description

2. 1. Findings from the co-creation workshops

Findings from Austria

In Austria, Freistadt is a very car-dominated community. There are only few bike lanes or sidewalks. Accordingly, the situation is unattractive for local residents. Although there is a mobility plan from 2014, it has not (yet) been implemented. This mobility plan contains strategies on how to make Freistadt a more sustainable and energy efficient city. By implementing this plan and promoting cycling, the goal is to further develop rural areas and thus make rural areas more attractive to young people. In this way, demographic change can be counteracted. Within the framework of the workshops, concepts are to be developed together with the citizens on how cycling can be made more attractive in Freistadt and how to implement the mobility plan. It is also important to motivate citizens to participate in political life and thus increase their satisfaction. New ideas and a fresh spirit regarding the topic of cycling were central points of the workshops.

Findings from Bulgaria

The results of the workshops in Bulgaria have shown many initiatives and ideas in order to increase the interest and awareness on both, company and policy level for circular bioeconomy in the region. One project idea dedicates to agricultural wastewater and the launch of a combined technology for reusing this water. The reuse of wastewater and nutrients is necessary and there are no adapted technologies for effective control over the supply of nutrients. The aim is to demonstrate innovative and competitive technology for the reuse of wastewater in agriculture, for water treatment and irrigation in one system, which would fit the requirements of farmers. The expected result of this project would be a complete applicable and marketable system for reusing wastewater.

A second project is the initiative for children's involvement and awareness for bioeconomy via providing an educational guidebook on bioeconomy, including a marketing campaign with free information material, banners and posters. Finally, a project idea was developed concerning wood chip processing. In Bulgarian rural areas the wood supply is sufficiently high, thus the participants brainstormed ideas on how a sustainable project related to the wood-processing industry can be created. As a result, they came up with an idea for a public-private partnership that would produce energy from processed wood chips in a sustainable way.

Findings from Croatia

The region of Croatia used to have a better developed agriculture and bioeconomy however, in the past years a decline has been noted. One of the workshop outputs was the challenges that administrations have to overcome in order to increase bioeconomy technologies again. According to the outputs, organisation and collection of biomass is still challenging and hence awareness for biomass potential and its circular characteristics needs to be developed. Furthermore, trans-sectoral cooperation including regional innovation systems

need to be developed aiming at new policies and financial instruments to support farmers and other participants of the bio-based value chain. The participants of the workshops agreed that without a national bioeconomy strategy that will align the framework conditions, it will be difficult to develop and start bioeconomy projects in Croatia. A bioeconomy strategy shall support the lack of communication between the public and private sectors, help with coordination among different sectors and be part of the educational system to prepare younger generations for the transition to a circular bioeconomy. Concluding, it can be said that it is necessary to encourage further knowledge and technology transfer from academy and science community towards business community for developing a circular bioeconomy, including a compelling national bioeconomy strategy coming from public authorities.

Findings from Czech Republic

In Czech Republic the implemented co-creation workshops have shown that a circular bioeconomy is still at the very beginning of its journey especially concerning the current state of public administrations and public actors. Despite the fact that the bioeconomy has a long-term support on EU level, on the Czech national level the topic is still not included in the government agendas nor explicitly mentioned in any thematic roadmap or national strategy. Therefore, there is a huge innovation potential for this field in the Czech Republic, which has not yet been sufficiently exploited. In order to raise awareness towards technologies in circular bioeconomy, business models are needed, as well as a national bioeconomy strategy for public and private sectors.

Findings from Germany

The core output of the workshops taken place in Germany was the specific need for the creation of platforms and networks concerning bioeconomy. The implementation of further strategies towards a bioeconomy shall lead to higher innovation in green technology coming from participatory dialogues with science, industry and society. This shall lead to an innovation-friendly and citizen-oriented social and economic environment for the sustainable development of circular bioeconomy. A main focus should be also put on awareness building for circular bioeconomy amongst companies but also citizens, resulting in an increase of motivation to work in regions that focus on bioeconomy productions.

Findings from Hungary

The main output from the workshop series is the RuralWatch programme concept. In its current format it is already in a state where some elements can be implemented into domestic support programmes (managed by the Ministry of Interior) with minimal friction, and also fit the goals and key parameters of the LEADER programme (managed by the Ministry of Agriculture). The idea to test the RuralWatch programme concept in a macro-regional setting was raised during the 3rd workshop and found a surprising amount of traction with the stakeholders. There is a good balance both in gathering experiences from around the region and in testing the system's interregional applicability. If it proves active, then it can be maintained indefinitely for bottom-up rural development cooperation.

Findings from Romania

The main output of the workshops implemented in Romania are the need for a national bioeconomy strategy such as in some of the previously mentioned regions. Therefore, a strategy that shows the roadmap and leads the way for the public but also private sector's development into bioeconomy technologies and systems is needed. With this strategy, businesses, e.g. the production of hemp, shall be boosted and grow for bioeconomy opportunities and concomitantly lead to a boost in agriculture. Communication and networking are one of the main necessities for the development of rural areas, therefore one of the outputs is the creation of a virtual bioeconomy platform used for information, knowledge and network transfer in the region.

Findings from Serbia

The outputs of the workshops held in Serbia were stressing the need of raising the interest of the general public by more engagement and the need for creating a more stimulating environment for innovative green companies. Calls for financing projects related to the circular bioeconomy, as well as the involvement of interested parties in defining areas for support, were pointed out as some of the needed measures in order to create a green economy. The emphasis was set on the involvement of public actors and awareness raising to motivate other stakeholders – municipalities, companies and NGOs – to start thinking green and circular.

Findings from Slovakia

The three co-creation workshops aimed primarily to map the current status of the implemented activities and to increase the motivation of the members of the Water Councils to be more active in the region. The second objective was to identify the barriers that hinder the process of implementing measures for the recovery of damaged landscapes within the Košice region. The third objective was to identify stakeholders that are involved in this process besides Water Council's initiative. The most important long-term goal of the organized co-creation workshops was to avoid dealing with the problems of damaged landscapes -and its climate change related challenges- through a sector-oriented approach.

Findings from Slovenia

The findings of the workshops in Slovenia showed barriers to accelerating the circular bioeconomy in the region on two levels – on a general business environment level and on a company level.

On the general business environment level, the lack of bioeconomy strategies and policies combined with strict regulations in agriculture are some of the challenges that need to be tackled for the development of the bioeconomy. Furthermore, lack of regulations for dealing with production residuals and by-products, as well as of incentives for companies to be encouraged to work in bioeconomy, are barriers as well.

On a company level the lack of awareness for the topic bioeconomy and the unwillingness of the companies to implement new and innovative technologies is jeopardising further development. Companies are not yet sustainability oriented and value more profit than a

positive environmental impact. However, companies did state that the development of digital technologies and tools would help in the transition to circular and bioeconomy oriented businesses.

The results showed that Slovenia needs a national bioeconomy strategy and regulations that foster circularity and bioeconomy in its territory. Additionally, a solid culture of cross-sectoral cooperation is still not established.

2.2. Opportunities tackling demographic change using (circular) bioeconomy

This chapter shows which main initiatives can be highlighted from the findings of chapter 2.1.

Table 1: Overview of the opportunities related to demographic change issues¹

Country	Initiative	Opportunity related to demographic change issues	Link to the bioeconomy
Austria	Connecting the region with other communities through biking paths	Attract young people to live in rural areas and increasing attractiveness for working in rural regions	Enhancement of energy efficiency and environmental compatibility
Bulgaria	Reusing wastewater in agricultural regions	New technologies development and job creation; attract youth to settle or resettle in the region	Valorisation of wastewater
	Levering the wood industry	Enhancement of the competitiveness of the wood processing sector	Biomass, added value of woody by-products and bioenergy
Croatia	Organized common approach to use biomass	Job creation in rural areas	Usage of biomass

¹ Slovenia is not reported in this table due to missing input.

	Revitalizing bioeconomy policies	Counteracting of high unemployment rates and poverty in rural areas	New policies on use of woody and forest biomass
Czech Republic	Promoting the proposal that the position of a “plenipotentiary for bioeconomy” should be established among the governments of the Danube countries	Strengthen rural areas by promoting bioeconomy	Promoting the systemic and coordinated governance of bioeconomy within DG RTD
	Bioeconomy solutions using the locally available biomass	Retain young people in place	Usage of biomass
Germany	Bioeconomy in combination with renewable energy (e.g. Agri-Solar)	Strengthen rural areas	Pushing bioeconomy towards circular bioeconomy
	Advocate for improved legislations and regulations	Transfer farm land into areas for a combined use of farm land with additional benefit by renewable energy generation (photovoltaic and windpower)	Better legislation and regulation for the take up of the bioeconomy
Hungary	Rollout of the RuralWatch programme	Bottom-up rural development cooperation	Sensible common use of infrastructure and natural resources
Romania	Pushing Local Action Groups (LAGs)	Revitalisation of small towns	Resource efficiency by sensible use of existing infrastructure instead of new construction
	Creation of a virtual bioeconomy platform	Information, knowledge and network transfer in the region	Raising awareness about bioeconomy
Serbia	Permanent	Strengthening rural	Raising awareness

	structured and organized work with stakeholders	areas through initiatives, so speeding up bioeconomisation	about bioeconomy
	Utilisation of available biomass	Strengthen rural areas	Usage of biomass
Slovakia	Landscape Recovery	Ensure environmental, food, social and climate security in rural areas	Sensible use of landscape and natural resources (e.g. water)

2.3. Main initiatives and project ideas identified

This chapter shows initiative, project or project ideas outlined from the co-creation workshops. Each country cluster gives detail on which stakeholders should be involved, expected duration, and whether it is more about the bioeconomy, rural development or urban-rural cooperation.

Austria

Output	Name	Stakeholder involved	Expected duration	Field of action ²
Initiative	Rest areas and trees: more trees at rest areas	Traffic board of the city council	Ongoing	Rural development

The Austrian output is the installation of more trees at rest areas, which should make cycling and walking more attractive, with providing shade on hot days. The next step is for the traffic board to start the planning of the location and design for the trees.

Bulgaria

Output	Name	Stakeholder involved	Expected duration	Field of action
Project idea	Danube Water	Local and regional government, NGOs, citizens	3 year	Rural development

² Bioeconomy in general, Rural development and/or Urban-rural cooperation

The project aims to demonstrate innovative and competitive technology for the reuse of wastewater in agriculture and for water treatment and irrigation in one system - a development tailored to the requirements of farmers. The expected result from the start of the project is a complete applicable and marketable system for reusing wastewater.

Croatia

Output	Name	Stakeholder involved	Expected duration	Field of action
Initiative	Organisation of events regarding financing of bioeconomy projects	SMEs	Long-term	Bioeconomy and Rural development

Croatia highlighted an initiative for finding ways on how to finance projects of bioeconomy in rural areas to foster the transition from linear to circular bioeconomy. The Financing of these projects should be aligned with all policies developed for rural regions, especially with investments in infrastructure.

Czech Republic

Output	Name	Stakeholder involved	Expected duration	Field of action
Project idea	The use of the post-mining lands for cultivation of industrial crops, namely hemp, as the feedstock for bio-based sectors	NCA, CzeCHemp cluster, regional development and innovation agencies, municipalities, business companies, social enterprises and universities	2023 and beyond	Bioeconomy and Rural development

The Czech partner, NCA, with the support of the Prague co-creation workshop participants, approached the Czech Ministry of Environment with the “Proposal to establish a Bioeconomy Committee at the Government Council for Sustainable Development”, the advisory organ of the Czech government. It would be the first bioeconomy-focused body on the intergovernmental level.

Germany

Output	Name	Stakeholder involved	Expected duration	Field of action
Initiative	Initiation of an Alb-Donau district office	Alb-Donau district office and other local/regional stakeholders	In preparation	Bioeconomy and Rural development

As follow-up of the co-creation workshop organised in Ulm in July 2022, the representative of the Alb-Donau district initiated a call (November 2022) for two stakeholder groups toward the preparation of a bioeconomy concept in this district. One will be set on regenerative energies and biomass, and the second one on material use of the biomass for the bioeconomy. The set-up of both groups is currently ongoing.

Hungary

Output	Name	Stakeholder involved	Expected duration	Field of action
Initiative	RuralWatch programme	Ministry of Agriculture, Ministry of Interior, municipalities	5 years	Rural development

The RuralWatch programme in its current format is already in a state where some elements can be implemented into domestic support programmes with minimal friction. The concept itself details the goals and the flow of activities and milestones from phase to phase, and defines some pointers for expert selection, communication, evaluation and monitoring.

Romania

Output	Name	Stakeholder involved	Expected duration	Field of action
Project	HempClub - Boosting hemp business opportunities together (COSME programme)	Members & coordinator of the Competitiveness pole -Innovative agro-industrial cluster (IND-AGRO-POL cluster) ³	2022-2024	Bioeconomy

³ www.inma.ro/indagropol/

The ongoing project in Romania is focusing on the boosting of hemp production and business models. Hemp should be seen as a new feedstock opportunities and hence lead to the development of a bioeconomy value-chain in Romania.

Serbia:

Output	Name	Stakeholder involved	Expected duration	Field of action
Initiative	Local public plots made available for composting	Municipality of Somobor, municipality of Apatin, citizens, public companies	2022 onwards	Urban-rural cooperation

The initiative in Serbia focusing on local public plots made available for composting is addressed to the public sector in anticipation of creating a more stimulating environment for innovative green companies.

Slovakia

Output	Name	Stakeholder involved	Expected duration	Field of action
Project idea	Pilot projects for the implementation of revitalisation measures	Agros s.r.o., agricultural sector	Ongoing (in Kosice region)	Bioeconomy and Rural development

The Landscape Recovery programme can be replicated for ensuring environmental, food, social and climate security in any part of Slovakia. The main objective is to dive deep into topics for comprehensive solutions for the WEF (water, energy, food) approach.

Slovenia

Output	Name	Stakeholder involved	Expected duration	Field of action
Initiative	Follow-up workshop	VCG.ai, Wood Cluster, Chamber of Commerce and Climate KIC, Municipality of Miklavž na Dravskem polju	To be announced	Bioeconomy

The participants agreed that digital tools such as the Value Chain Generator (VCG) can contribute extensively to accelerating bioeconomy practices in Slovenia. Therefore, it was agreed, that a follow-up workshop on how and where to implement the VCG to facilitate the bioeconomy will be conducted.

Figure 1 gives an overview on the overall opportunities of the co-creation workshops held from February to November 2022, besides the main opportunities highlighted above.⁴

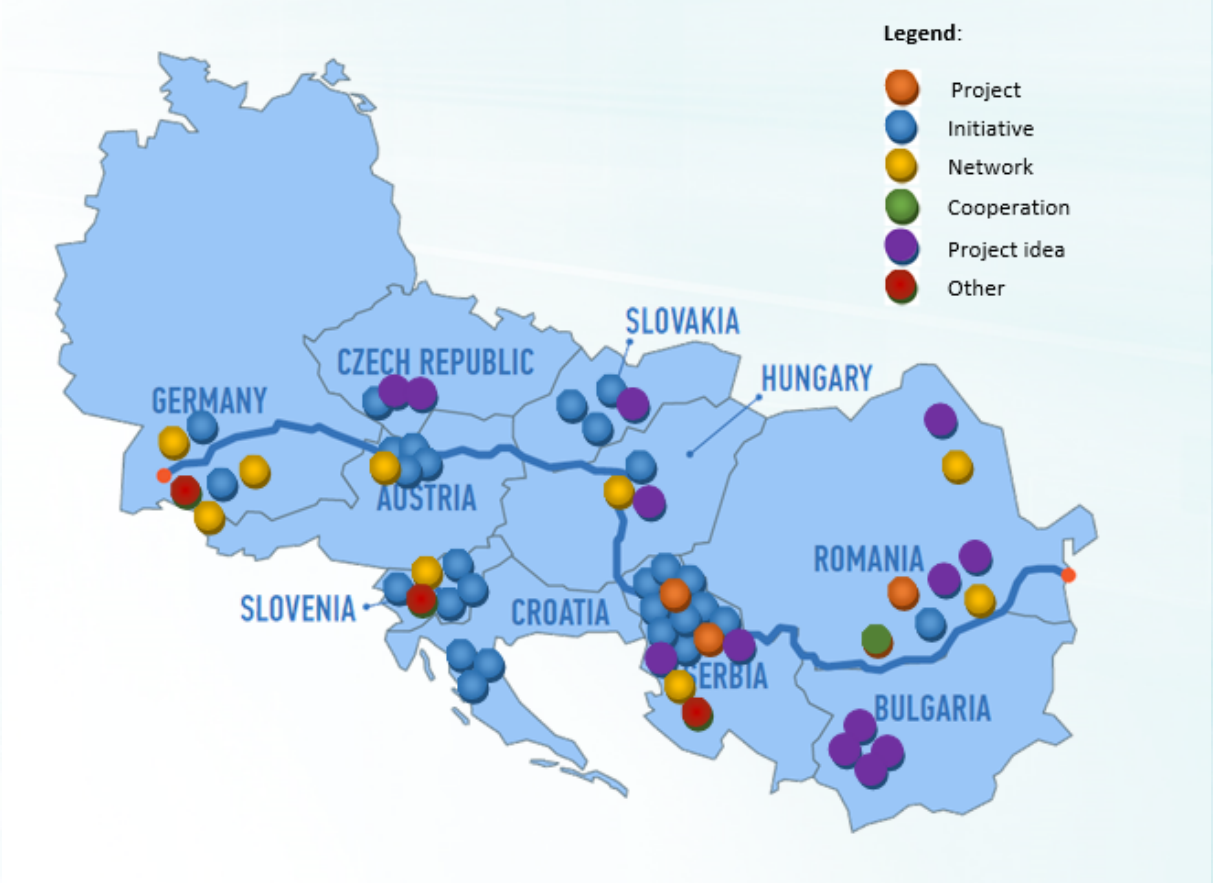


Figure 1: Geographical distribution of the opportunities identified in the project regions

⁴ More information can be found in DT4.2.2 (Feedback reports on co-creation workshops); <https://www.interreg-danube.eu/approved-projects/godanubio/outputs>

3. Geographical coverage and transferability

The output will be available online and the project partners will disseminate it also on transnational level, depending on the scope and final implementation of some of the initiatives and project ideas listed in the tables of the chapter 2.3.

The output is designed in a way that other regions can see what initiatives, project ideas and projects have been highlighted within the framework of GoDanuBio and thus should serve as an example of what can be implemented in the field of bioeconomy, rural development and urban-rural cooperation. Not every content of the output will be equally transferable to all European regions. Those regions that share similar economic, ecological, social, and political starting point, thus similar territorial specificities, will be able to implement initiatives from the respective project region better than others.

Especially those initiatives in which policy-makers are involved (e.g. national and regional bioeconomy policies), or need to be involved, are more difficult to transfer to other regions. Political structures differ greatly from country to country, and the willingness of politicians to promote bioeconomy and a sustainable rural development also varies. Thus, these initiatives need to be subjected to even more intensive scrutiny to determine whether they are transferable to the region.

In general, the output is transferable to other regions, but it must be adapted to the respective circumstances and structures. Again, the more similar the regions are, the easier it is the uptake of this output.

4. Use of the opportunities by target groups

Table 2 shows which of the target groups addressed in GoDanuBio are most likely to be involved in the main initiatives and project ideas listed in the chapter 2.3. Local public authorities and business support organisations were named above all. This can be explained as follows: local public authorities are often the first point of contact when something needs to be developed or changed in the region. They are also quicker and easier to access than, for example, regional or national public authorities. In the case of business support organisations, clusters were mentioned several times. This is because clusters offer large networks with key players that can be useful for the planned initiatives.

Table 2: Number of target groups referred in the opportunities represented in Figure 1

Target group	Number of opportunities in which the target group is involved in
Business support organisation	14
Local public authority	12
SME	8
National public authority	7
Sectoral agency	4

Nonetheless, it should be stressed that the cross-sectoral nature of the bioeconomy, as well as the systemic planning of rural development, or even the set-up of urban-rural interactions, always need of a multi-stakeholder approach as well as coordination between different governance levels. Depending on the political structure of each addressed country or region, this might vary case by case.