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Capitalisation of existing results

Serbia

Alma Mons
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Chapter 1: Short description of the region and its economic situation in general

Serbia is a parliamentary republic in Southeastern Europe, landlocked with 8 border countries. The region, Autonomous Province of Vojvodina, covers the northern part of Serbia, i.e., the southern part of the Pannonian Plain, where the flows of the great rivers Danube, Sava and Tisza converge. It is multinational society and there are officially six languages in Vojvodina with the use of their alphabets. AP Vojvodina independently, in accordance with the Constitution of Serbia and its Statute, regulates its own organization, develops and adopts Action plans for the implementation of strategies, plans and programs of the Republic of Serbia related to AP Vojvodina.

Vojvodina covers an area of 21,614 km², that is 26,7% of the territory of the Republic of Serbia. The population in 2019 is estimated at 1,85 million (26,7% of total population of Serbia). Last census was in 2011, natural increase in the last decade is negative in Vojvodina (-10.156%). The ongoing depopulation is the main feature of the projected movement of population. Vojvodina region is a rural region, it has 89.4 inhabitants/km²¹. Life expectancy is 73 for men and 78 years for women in 2019. The gross domestic product of the Republic of Serbia is 45,913 million Euros in 2019², and the region of Vojvodina participates with 25.9%³. The growth rate in 2019 was 4,2% compared to the previous year and 5,1% in the first quarter of 2020. The protracted crisis caused by Covid19 during the summer, the elections, the slowdown in legislative activity, and economic trends around the world will affect growth this year, the estimated fall in GDP is 3% compared to 2019⁴. Average Vojvodina gross income in 2019 is 71,818 RSD⁵ (approx. 6,000 Euros), slightly lower than Serbian average earnings in the Republic of Serbia, but only 60% of the value of this indicator for the Belgrade region (the capital).

Key economic sectors in Vojvodina are agro- food, IT, automotive, metalworking and cables, building materials, petroleum industry, chemical products, and tourism. The economy is based on quality arable land, which occupies 84% of its area. The total arable land is 1.78 million hectares and out of it, one third is irrigated. About 70% of the yield from these fields falls on cereals, 20% on industrial plants, and 10% on other crops. A part of the yield is exported, but most are processed in the domestic food industry, stationed mainly in Vojvodina (meat, fruits and vegetables processing plants, oil factories, sugar, dairies, etc.).

Vojvodina Region has the largest share in Serbian exports in 2019 (35%). In July 2020 the share is slightly lower, 33.9%. The major external trade partners in exports in July 2020, listed in order of exports value, are: Germany, Italy, Bosnia and Herzegovina, Romania and Hungary.

¹ According to the OECD criteria, less than 150 inhabitants/km² refers to rural

² region <https://data.stat.gov.rs/Home/Result/0902010302?languageCode=sr-Cyrl>

³ <https://www.stat.gov.rs/sr-latn/vesti/?a=09&s=090204>

⁴ World Bank Economic Reporting for the Europe and Central Asia Region, 07.10.2020

⁵ Regions in Serbia 2019, RZS: ISSN 2620-1275

Unemployment rate is 9% in 2019⁶, but anti-Covid19 measures affected positively to unemployment rate, 7,7% in the 2. quarter 2020. Compared to the same period 2019, the total registered employment increased by 1.9%.

In primary education, which is compulsory, the coverage of the generation is 98.1%. The coverage of the generation with secondary education is about 87.4%, and with higher education is 54.6%. The University of Novi Sad has a well-developed research infrastructure and great potential for innovation. It encompasses, among others, [Faculty of Agriculture](#), [Faculty of Technical Sciences](#), [Faculty of Technology](#), [Scientific Institute of Food Technology](#), [BioSense Institute](#), and the [Institute of Lowland Forestry and Environment](#) as a solid infrastructure for further development of circular bioeconomy.

The share of total budget funds for R&D in gross domestic product in 2019 was 0.40% on Serbian level. In Vojvodina it is around 0,90% of GDP: 0,41% comes from business sector; 0,33% high education; governmental expenditures 0, 16 %. According to the results of the Labor Force Survey, in 2019 human resources in science and technology⁷ were 16,9%⁸ of total population of Vojvodina.

Chapter 2: Objectives and identification

The main objective of this deliverable is to gain good knowledge and, when possible, to capitalize results from a selected list of EU-funded projects and macroregional documents that are related with demographic change, circular bioeconomy and/or sustainable rural development.

The first research batch, focused on Horizon 2020 projects, was delivered by MIZS; BIOPRO made a first selection from this batch and extended the search in October 2020 with a focus on Interreg projects (Danube Transnational Programme, Alpine Space and Interreg Europe, including ARPAF) using the keep.eu database. Further research related to Horizon 2020 projects was done through CORDIS and the database of the Bio-Based Industries/BBi JU funded LIFT project that encompasses the results of up to 34 coordination and support actions funded mainly by Horizon 2020.

As search criteria, projects starting from 2016 onwards were considered and it was intended that most of the selected projects had at least one of the countries participating in GoDanuBio in their consortia. From each relevant project, its deliverables and outputs that could be interesting for the development of GoDanuBio were identified using the project websites. In some particular cases, the deliverables were not available and, if relevant, were requested by other means.

⁶ Regions in Serbia 2019, RZS: ISSN 2620-1275

⁷ People aged 15-74 who have either completed higher education or are employed in the fields of science and technology as experts, engineers, professional associates or technicians (Labor Force Survey, 2019)

⁸ Labour Force Survey in The Republic of Serbia, 2019

The search has delivered 19 EU-funded projects and 12 transregional documents. Only a handful of them have a focus on the deployment of the bioeconomy in the Danube macro-region; some of the outputs can be used as inspiration or even guideline to gain insight in the transnational approach aimed by the project. Complementary to this search, all partners are invited to identify further transregional projects and macroregional documents that are relevant for their regions with regard to the implementation of GoDanuBio and to include them in their reports.

(a) Projects:

Title: **MOVECO**, <https://keep.eu/projects/18488/>

- Coordinator: Chamber of Commerce and Industry of Slovenia
- Start/Finish date: 01.12. 2016 - 31.08. 2019
- Main objectives: to improve the framework conditions and policy instruments for eco innovation and the transition to a Circular Economy, fostering smart and sustainable growth and reducing disparities among the regions in the Danube Region
- Measures related to circular economy

Transnational Strategy to Accelerate Transition Towards a Circular Economy in the Danube Region; Cross-Country Road Maps for the innovation focused on waste streams and waste recovery; Circular Economy Toolbox

- Did our organization take part in the project? No.
- Results to be capitalized in our region/country briefly specified:

Objectives and policy instruments set in the Transnational Strategy; The region-specific Road Map that propose measures and actions to help the transition to a circular economy; Toolbox with innovation tools and proposed area of companies' cooperation.

Title: **DanubeS3Cluster**, <https://keep.eu/projects/19529/>

- Coordinator: South Muntenia Regional Development, Romania
- Start/Finish date: 1.07. 2018 - 30.06.2021
- Main objectives: Developing smart and coordinated cluster policies in the context of RIS3; foster transnational cluster cooperation in Agro-Food sector
- Measures related to circular bioeconomy and rural development:

Danube S3 Cluster Strategy with recommendations for policy interventions in order to support the development of a sustainable, resource efficient agro-food sector in the Danube region

- Did our organization take part in the project? No
- Results to be capitalized in our region/country briefly specified:

Cluster Strategy with recommendations for policy interventions; the strategic option for three cross-cutting themes - interconnected and able to generate new innovative project ideas.

Title: **FORESDA**, <https://keep.eu/projects/18459/>

- Coordinator: CyberForum e.V.
- Start/Finish date: 01.01.2017- 30.06.2019
- Main objectives: Support the transformation of traditional forest-based industries into sustainable manufacturing areas by an innovative cross-sectoral and transnational approach
- Measures related to circular bioeconomy:
Transnational Strategy on Cross-sectoral Level (Forest sector); Local innovation Action plans (region by region) related to forest sector
- Did our organization take part in the project? No
- Results to be capitalized in our region/country briefly specified:
Transnational Strategy on Cross-sectoral Level (Forest sector); Innovation Action Plan for Serbia

Title: **DanuBioValNet**, <http://www.interreg-danube.eu/approved-projects/danubiovalnet>

- Coordinator: BIOPRO
- Start/Finish date: 01.01.2017- 30.06.2019
- Main objectives: Create Danube bio-based value-added networks to enhance transformation from fossil-based economy towards an economy using renewable resources.
- Measures related to circular bioeconomy:
Joint Strategy for Bio-Based Industry Cluster Policy; Common Action Plan towards better framework conditions for biobased eco-innovation in Danube Region
- Did your organization take part in the project? No
- Results to be capitalized in our region/country briefly specified:
Joint Strategy and Action Plan: Transformative Activities for the Bioeconomy

(b) Macroregional documents:

Title: **Report on the Impact of Demographic Change**,
https://ec.europa.eu/info/sites/info/files/demography_report_2020_n.pdf

- Author/Publisher: Secretariat General European Commission
- Year of publication: 2020
- Scope of the publication: Report, Thematic focus - Bioeconomy
- Measures related to demographic change:
The study on the impact of Europe's demographic change and implications for the future of the welfare and health systems, budgets, housing and infrastructure needs.

Title: **Bioeconomy development in EU regions,**

https://ec.europa.eu/research/bioeconomy/pdf/publications/bioeconomy_development_in_eu_regions.pdf

- Author/Publisher: European Commission DG RTD
- Year of publication: 2017
- Scope of the publication: Report, Thematic focus - Bioeconomy
- Measures related to demographic change, circular bioeconomy and rural development

Study on the needs and bottlenecks on the way to deploy the bioeconomy in the regions; takes into consideration the specificities of the regional profiles, objectives and needs related to it.

Title: **The biobased status in the Danube Region,** <https://www.bioeconomy-library.eu/wp-content/uploads/2019/11/The-BioBased-Status-in-the-Danube-Region.pdf>

- Author/Publisher: DanuBioValNet Consortium
- Year of publication: 2017
- Scope of the publication: Report, Thematic focus - Bioeconomy
- Measures related to bioeconomy and/or rural development

The report on the current regional situation regarding the strengths and weaknesses associated with bio-based products, suppliers and markets; innovation opportunities and R&D competences; regional bio-based strategies and government policies already in place and policy gaps.

Title: **How to use RDPs to support rural bioeconomy?**

https://enrd.ec.europa.eu/sites/enrd/files/s11_bioeconomy-handout_how-to-support-bioeconomy.pdf

- Author/Publisher: European Network for Rural Development, Thematic Group on Bioeconomy
- Year of publication: 2019
- Scope of the publication: Report, Thematic focus - Urban-rural interaction (sustainable rural development)
- Measures related to demographic change, circular bioeconomy and/or rural development

Recommendations developed by the TG on the use of RDPs to support rural bioeconomy, organized according to four key elements: launch the value chain, supporting and investing in the bioeconomy value chain, making the rural bioeconomy value chain self-sustaining; monitoring, evaluation and learning as a key at all stages of the process.

Title: **How to mainstream the bioeconomy in rural areas?**

https://enrd.ec.europa.eu/sites/enrd/files/s11_bioeconomy-handout_how-to-mainstream-bioeconomy.pdf

- Author/Publisher: European Network for Rural Development, Thematic Group on Bioeconomy
- Year of publication: 2019
- Scope of the publication: Report, Thematic focus - Urban-rural interaction (sustainable rural development)

- Measures related to demographic change, circular bioeconomy and/or rural development
- Recommendations from the ENRD Thematic Group on “Mainstreaming the bioeconomy” with the overarching objective to "encourage the development of sustainable bioeconomy value chains in rural areas in order to promote employment, economic growth, and social inclusion, while preserving ecosystems."

Chapter 3: Findings

Regional development agency “Alma Mons” didn’t participate in any of the listed projects, but we have knowledge about the implementation status of the outcomes of some projects, and on the other hand, we spotted the opportunity to utilize the information, proposed policy interventions, developed and tested innovation tools and tools to connect actors in a bio-based industry, etc. in the course of drafting upcoming national and regional strategic documents.

(a) Projects:

MOVECO

The circular economy concept in Serbia is still in its early stage. The first step towards a circular economy is set in the new legislative framework (the application of the waste management hierarchy, especially the prevention of waste creation) in the amendments to the Waste Management Act, released in January 2016, considering the recommendations of the European Commission on the Circular Economy. There is a number of strategies developed for the end of 2019 related to Waste Management, Environmental Protection, Biological Diversity. Serbia plans to refer to the circular economy principles in the updated waste strategy (ongoing), and it is beneficial to use as inspiration: (a) Objectives and policy instruments set in the Transnational Strategy; (b) The region-specific Road Map that propose measures and actions to help the transition to a circular economy and reach higher standards over shorter timescales; (c) Toolbox with four types of innovation tools, as well as proposed area of companies’ cooperation. Also, the PP from Serbia, “Mihajlo Pupin” Institute, became local Competence Center on Circular Economy that could help in the implementation of the Strategy.

DanubeS3Cluster

The drafting of the Action plan for the implementation of Industrial Strategy 2021-2030 is on-going in Serbia. Cluster policy measures that are part of the Action plan, use the Cluster Strategy prepared within the project as an initial point. Also, the three cross-cutting themes - interconnected and able to generate new innovative project ideas: healthy food, business models for circular economy and open innovation, that are used to test the Strategy, can be taken as an inspiration, not only in horizontal measures in Industrial strategy, but for the implementation of Serbian Smart Specialization Strategy (4S): e.g. priority area 1– food for the future.

FORESDA

Valuable inputs for policy makers on national and regional level in developing upcoming Wood Industry Development Strategy, planned to be adopted in 2021. Also, Innovation Action Plan for Serbia to improve the framework conditions for forest-based cross-sectoral value chains, demonstrated a new perspective on Strategy of this traditional sector.

DanuBioValNet

The idea of how to bio-economize existing clusters could be the inspiration for Cluster supporting policy measures and the experience from the pilot actions taken during the DanuBioValNet project can be utilized. Also, the project contributed to the new Smart Specialization Strategy of Serbia (particularly to Priority area 1, Food for the future-food added values through a knowledge-based partnership) released in February 2020, that is currently under implementation.

(b) Macroregional documents:

Report on the Impact of Demographic Change

On the basis of this report, a dialogue with relevant stakeholders should be initiated in particular at regional level in order to define new approach to population policy.

Bioeconomy development in EU regions

The insight into the needs and bottlenecks on the way to deploy the bioeconomy in different regions; case studies and good practice examples, can be starting point for comparison with the situation in Serbia, and to initiate dialog with relevant stakeholders in bioeconomy.

The biobased status in the Danube Region

The informative study of the status of bioeconomy in Danube region allowing the perception of how Serbia fits into the broader picture and what are the possibilities for further development of bioeconomy.

How to use RDPs to support rural bioeconomy? How to mainstream the bioeconomy in rural areas?

Although Serbia is not a member state and cannot use the European Agricultural Fund for Rural Development, there are other funds that are open for Serbia. Also, At the time of writing the document, Serbia is searching for new strategic approach to rural development trying to streamline the other policies in support to rural bioeconomy. The identified different elements of rural value chains that can benefit from the development of the bioeconomy, how these benefits can be delivered in rural areas and how they can be made sustainable and self-supporting, are important findings that can be used as to start dialog with Serbian stakeholders.

Chapter 4: Consequences for GoDanuBio

The findings in Chapter 3 of this report demonstrate that there are a lot of recently developed or ongoing initiatives that could be capitalized in Serbia and outcomes used as inspiration in drafting strategic documents, for the process of implementation of regional dialogues or used at policy level.

To begin with, the initiatives provide us with an insight into the transnational approach. During the implementation of GoDanuBio, it is expected that the transfer of knowledge about the approach, main findings and recommendations developed in the studies and projects (such as studies: Bioeconomy development in EU regions, European Commission Report on the Impact of Demographic Change etc., or the results of the projects: Transnational Strategy on circular economy in the Danube Region, Action Plan on circular economy in the Danube Region, Transnational Strategy on Cross-sectoral Level-Forest sector, Local innovation Action plan for Serbia related to forest sector, Danube S3 Cluster Strategy targeting clusters related to agro-food, Joint BioBased Cluster Policy Strategy, Common Action Plan towards better framework conditions for biobased eco-innovation in Danube Region), will have a positive impact in our region. The activities related to T2: “Bio-economization of Regional Excellence”, should consider the methodology developed and applied in projects, and use it in the identification of innovation opportunities, development a new set of skills that can be transferred and methodology to foster intensive knowledge exchange.

The tools that are developed in projects (e/g: Circular Economy Tool Box- focus in SMEs; Engagement of SMES and companies; Good practices to collect ideas for the action plan; Cluster Tool Box „New Cluster Services to support SMEs in bio-based industries”; etc.) on how to analyze and develop participative governance models of the region, how to develop and implement regional dialogues as well as policy agendas, can be incorporated in a smart way into capacity building and co-creation processes while performing the activities related to T4: “Policy Action and Capacity Building”.