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**“Green transition in the
economy - situation and
perspectives“**

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stanje i perspektive“***

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“Green transition in the economy - situation and perspectives“

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**“GREEN TRANSITION IN THE
ECONOMY - SITUATION AND
PERSPECTIVES“**

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THE IMPORTANCE OF CIRCULAR ECONOMY DEVELOPMENT STRATEGIES IN THE WESTERN BALKANS REGION

ABSTRACT: From the beginning, the concept of circular economy has been exposed to a large number of criticisms in scientific literature and practice, which are related to the understanding of the term circular economy. Nevertheless, the term itself creates economic, environmental, and social benefits, although the area of measurement of the circular economy still is not clearly defined. For now, the literature has defined two measurement areas, which on the one hand refer to the technical aspects of the circular economy concept, while the other refers to the sustainability and intensity of the impact of the circular economy implementation strategy and its application. The Eurostat methodology for measuring the development of the circular economy, which is of key importance for monitoring the sustainable development of the Western Balkan region, has recently been applied. This paper aims to point out the importance of a circular economy development strategy in the Western Balkan region. The paper consists of three parts. The first part of the paper indicates the analysis of the current strategy for the development of the circular economy in Europe. The second part of the paper analyzes the circular economy development strategy

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in the Western Balkans countries, while the third part of the paper shows progress in the circular economy strategy in the Western Balkans, by measuring the development of the circular economy with Eurostat indicators. Finally, the concluding considerations of the author are given.

KEYWORDS: strategy, sustainable development, circular economy, region, Western Balkans

INTRODUCTION

Environmental problems, such as loss of biodiversity, pollution of water, air and soil, depletion of resources, and overuse of land, threaten the life support system on Earth (Rockstrom et al., 2009). One of the solutions for preventing environmental problems is the concern for sustainability, which is increasingly emphasized by today's policymakers and global companies.

Sustainability as a term first appeared in forestry, when faced with a shortage of wood supply (Mantel, 1990). The term comes from the French verb *soutenir*, “to support” (Brown et al., 1987) and is based on the forestry principle that the amount of wood cut does not exceed the volume that grows back (Geissdoerfer et al., 2016). Over time, this has been transferred to the context of ecology, i.e. the principle of respect for nature to regenerate (Duden, 2015).

As one of the solutions for sustainability issues, the concept of circular economy (CE) appeared (Brennan et al., 2015), as one of the significant aspects of the European Green Deal. The goal is to replace the previous “linear economy” (Tošković et al., 2023; Knežević et al., 2022), which was based on intensive exploitation of non-renewable natural resources (Bogetić et al. 2021, Marinković et al. 2023). The basic three principles of the circular economy are keeping materials and products in use as long as possible; reducing waste and pollution and restoring natural systems (DS Smith, 2022). Based on these various contributions, the CE can be defined as a regenerative system in which resources and waste are circulated, emissions and energy leakage are minimized, and material and energy loops are closed and narrowed. This can be achieved through sustainable design, maintenance, repair, reuse, remanufacturing, refurbishment, and recycling (Geissdoerfer et al., 2016).

In 2015, the European Commission adopted a comprehensive European Circular Economy Package (European Commission, 2015), which motivated companies to take advantage of the CE opportunities, value, and potential. In April 2022, the European Commission published a set of proposals to encourage the EU towards a circular economy (CE). The current literature on the subject of CE suggests the tendency of the policy of the European Community to shape the term CE into the term eco-modernism, i.e. the market mechanism and the role of technology in preventing environmental problems (Hartley et al., 2020). It is important for the future of the economy because it will influence the powers of the green transition and the solutions that will promote the future model of production and consumption. However, the CE policy continues to update already existing production and disposal targets, encouraging innovation, driving changes in the market, and improving government practices towards circularity, which should intensify the transition of technological innovation. The literature is mostly critical of circularity, highlighting its inability to meet the EU's environmental ambitions (Fitch-Roi et al., 2020). EC should find new sources of materials and intensify their use in the economy. This opening should enable more ambitious CE visions, which are more likely to meet the EU's environmental ambitions and ensure a sustainable future.

This paper aims to point out the importance of a circular economy development strategy in the Western Balkan region. The paper analyzes current CE development strategies in Europe, followed by circular economy development strategies in the Western Balkan countries, while the third part of the paper evaluates the progress of the circular economy in the Western Balkans, measured using Eurostat indicators.

THE CURRENT STRATEGY FOR THE DEVELOPMENT OF THE CIRCULAR ECONOMY IN EUROPE

Regulating the circular use of resources in the economy is a key radius for minimizing the impact of the economy of EU countries on the environment. In addition to sustainable environmental and economic impact, the circular economy has the task of contributing to "climate mitigation" and restoring industrial leadership in the EU itself. This further means that joint forces create joint benefits, which should contribute to the fulfillment of goals within the framework of the resource efficiency plan. In this way,

the circular economy creates space for the elaboration and implementation of business models through the optimization of energy and resources during the entire life cycle.

An EU action plan for the circular economy was the first plan adopted by the European Commission in 2015, which included measures (European Commission, 2023):

- to help stimulate Europe’s transition towards a circular economy,
- strengthening global competitiveness,
- encouraging sustainable economic growth and
- creation of new jobs.

This action plan determined concrete actions, with measures related to the product life cycle: from the moment of production and consumption to the moment of waste management and the market of secondary raw materials with the revised legal proposal on waste at the end (European Commission, 2023).

After that, on March 11, 2020, the European Commission adopted the New Circular Economy Action Plan “The EU leads the transition to a healthy planet”, which represents a huge step towards the set goal and is one of the main guidelines of the European Green Deal (Chart 1). The new circular economy action plan will play a key role “in achieving the overarching Green Deal goal of making Europe climate neutral by 2050 and can help spark an industrial renaissance for a clean planet for all.” (FEA, 2023).

Chart 1. The new Circular Economy Action Plan



Source: FEA (2023).

In addition, the New Circular Economy Action Plan (European Parliament, 2023):

- introduces legislative and non-legislative measures,
- deals with areas that contribute to the realization of added value,
- progressively introduces the sustainable product policy framework, with product design actions, empowerment of consumers and public buyers, as well as greater circularity in production processes,
- is based on key value chains, on the initiative of sustainable products to support circular product design, with a special focus on electronics and ICT, packaging, textiles, construction, plastics, and food,
- initiates waste prevention and circularity actions, through issues of hazardous substances, better functioning of the EU market for secondary raw materials and waste exports from the EU,
- deals with cross-sector activities in the field of economy, research, and innovation;
- deals with the promotion of the circular economy at the international level;
- updates the existing framework for monitoring the circular economy.

In 2022, a set of two packages of proposals to boost the circular economy were published. The first package contained a proposal for an eco-design regulation for sustainable products, an EU strategy for sustainable and circular textiles, and a proposed Directive for consumer empowerment in the green transition. After that, in November of the same year, a second package of proposals was published, which included “a proposal for the revision of EU legislation on packaging and packaging waste, an EU policy framework on bio-based, biodegradable and compostable plastics and a proposal for a regulation on EU certification for carbon reduction.” (European Parliament, 2023).

In the same year, the Commission proposed new rules on packaging across the EU, to reduce waste and consumer disappointment. According to data from the European Commission (2022):

- Every person in Europe generates on average almost 180 kg of packaging waste per year,
- packaging is one of the main users of virgin materials (40% of plastic and 50% of paper in the EU is intended for packaging),

- without reacting to the given situation, by 2030 the EU would have recorded an increase in packaging waste of 19%, and in plastic packaging waste by as much as 46%, so the new rules aim to stop the growth trend,
- it will provide consumers with reusable packaging, reduce unnecessary packaging, limit over-packaging, and provide clear labels for correct recycling,
- it will create new business opportunities for industry, especially for smaller companies, reduce the need for virgin materials, increase recycling capacity in the EU, and make the EU less dependent on primary resources and external suppliers.

Finally, on March 22, 2023, the European Commission presented a third package of proposals, which includes the “Green Claims Directive” (proposals for substantiating and communicating explicit environmental claims), as well as a proposal for a Directive on Common Rules (proposals for promoting the repair of goods) (European Parliament, 2023).

THE CIRCULAR ECONOMY DEVELOPMENT STRATEGY IN THE COUNTRIES OF THE WESTERN BALKANS

The new growth strategy for the Western Balkans region includes a transition from a traditional economic model to a sustainable economy by the European Green Deal. The Action Plan of the Green Agenda for the Western Balkans includes 58 actions and 7 roadmaps for implementation that are focused on: Circular economy, Climate policy, Sustainable mobility, Sustainable energy, Sustainable energy, Protection of nature and biodiversity, Depollution and Sustainable agriculture and food supply. Regarding the concept of circular economy, which is the subject of analysis in this paper, it can be stated that it is a relatively new concept in the region of the Western Balkans and is considered abstract by the majority of citizens and business representatives in countries of the region.

The strategy for the incorporation of the circular economy in the Western Balkan region refers to the inclusion of the goals and practices of the circular economy in all policies and sectors of the economy, while simultaneously raising the awareness of citizens and business representatives about the concept and all the benefits that the circular economy brings for the development of countries (Table 1). Progress in compliance with waste

management legislation is rather slow and limited in all countries of the Western Balkans, especially the implementation of the existing legal and political frameworks, which represents an even greater challenge (Regional Cooperation Council, 2021).

Table 1. Proposals for accelerating the circular economy in the Western Balkans

Develop circular economy strategies and legislation on the national and regional level	<ul style="list-style-type: none"> • working on legislation preparation, • creating working groups including NGOs, industry, municipalities, ministries, the government, • setting up round tables on certain topics, • bring best practices from abroad on how certain regulations change results, • creating tools for green/circular public procurement.
Industrial policy review and cooperation with the private sector	<ul style="list-style-type: none"> • mapping waste management and recycling strategies and infrastructure, • creating good case practices, • creating circular platforms, • regional cooperation in the prevention of plastic pollution, • creating zero waste concepts for administration and industry, • innovation projects promotion.
Cooperation with municipalities	<ul style="list-style-type: none"> • waste management analysis of residual waste and sorted waste, • introducing and implementing organic waste collection systems, • circular city scans, • door-to-door collection, • waste collection management strategies and infrastructure, • ‘Pay as you throw system development, • smart solutions for waste data collection, • creating circular maps of cities, • creating guidelines for citizens on waste prevention and waste sorting

Studies on certain topics	Studies regarding: <ul style="list-style-type: none"> • new plastic economy, • reducing plastic waste, • microplastic, • bioplastic, • textile industry challenges, • waste management systems in cities/regions, • food waste prevention.
Consumer awareness initiatives (e.g. reduce, reuse, repair)	<ul style="list-style-type: none"> • launch a website with a regular blog about the circular economy in everyday life, • regional, national, and international events with topics of the circular economy, • implementation of the circular economy principles into the events, • workshops on repairing, reusing, clothes SWAPs, • events promoting local and circular designs, • shared economy promotion in the field of transport, • starting a library of things
Educational activities	<ul style="list-style-type: none"> • national or regional school programs with practical excursions to waste management and recycling plants, landfills, • workshops on repairing, rethinking, reducing, and reusing.

Source: European Environmental Bureau (2023:40).

Regarding waste management and recycling, as key pillars of the circular economy concept, the linear approach of waste collection and disposal still prevails instead of an integrated sustainable waste management system based on circularity. The generation of waste in Western Balkans countries has been constantly increasing during the previous years as a result of economic development and increased consumption, but it is still much lower than the EU average in terms of recycling rates, i.e. below 3% compared to the EU average of 44%. According to the available data, it can be concluded that the situation regarding waste recycling in the Western Balkans region is overwhelming. In Albania and Kosovo, recycling rates remain significantly low. In 2019, despite the presence of a recycling industry, the amount of recycled waste in Albania was about 18% of the total amount of generated waste, while in Kosovo was only about 5% of the total amount of waste being recycled in 2020. In Bosnia and Herzegovina, the situation is even worse, where the recycling rate is only 0.29%. In Montenegro, 10% of the

total amount of municipal waste is reused or recycled, while in Serbia, in 2018, the municipal waste recycling rate was at 3%. The situation in North Macedonia is bad as well, where recycling rates for municipality waste was 0.9%. Due to the unavailability of adequate data on individual issues for all the countries of the Western Balkans, it is very difficult to assess the real situation with certainty (The Balkan Forum, 2021).

Regarding the circular economy development strategy in the Western Balkan region, a comprehensive framework is needed that would include greater determination of the decision-makers, a strong legislative framework, and policy, raising awareness among citizens and businesses, as well as financial incentives for encouraging a transition to a circular economy. According to the Regional Cooperation Council, “the new policy framework developed under the European Green Deal, including the new Circular Economy Action Plan, the new Industrial Strategy for Europe, and waste and industrial emissions legislation, together with initiatives on zero-carbon steel making and climate-neutral and circular products provide a strategic orientation towards carbon neutrality, not only for the EU but for the Western Balkans as well” (Regional Cooperation Council, 2021, 18). The rapid undertaking of these initiatives will contribute to the utilization of significant economic potential that the Western Balkans region has regarding achieving environmental benefits.

DEVELOPMENT OF THE CIRCULAR ECONOMY AND EUROSTAT INDICATORS

Eurostat uses individual indicators to monitor the circular economy in the countries of the European Union. The indicators are divided by areas, which refer to the use of materials, the attitudes of households and individuals towards the concept of circular economy, as well as the level of companies that look at the country’s competitiveness and innovation for the development of a circular economy (Mitrović, Pešalj, 2021). Circular economy indicators are (Eurostat, 2023a):

- “Production and consumption (Material footprint, Resource productivity, Waste generation per capita, Generation of waste excluding major mineral wastes per GDP unit, Generation of municipal waste per capita, Food waste, Generation of packaging waste per capita, Generation of plastic packaging waste per capita),

- Waste management (Recycling rate of municipal waste, Recycling rate of all waste excluding major mineral waste, Recycling rate of packaging waste by type of packaging (WEEE) separately collected),
- Secondary raw materials (Circular material use rate, Contribution of recycled materials to raw materials demand - end-of-life recycling input rates (EOL-RIR), Trade in recyclable raw materials),
- Competitiveness and innovation (Private investment and gross added value related to circular economy sectors, Persons employed in circular economy sectors, Patents related to recycling and secondary raw materials),
- Global sustainability and resilience (Consumption footprint, Greenhouse gas emissions from production activities, Material import dependency, EU self-sufficiency for raw materials).“

Data for the countries of the Western Balkans are available for:

Production and consumption

- Indicator Resource productivity,
- Indicator Waste generation per capita,
- Indicator Generation of waste excluding major mineral wastes per GDP unit,
- Indicator Generation of municipal waste per capita).

Global sustainability and resilience

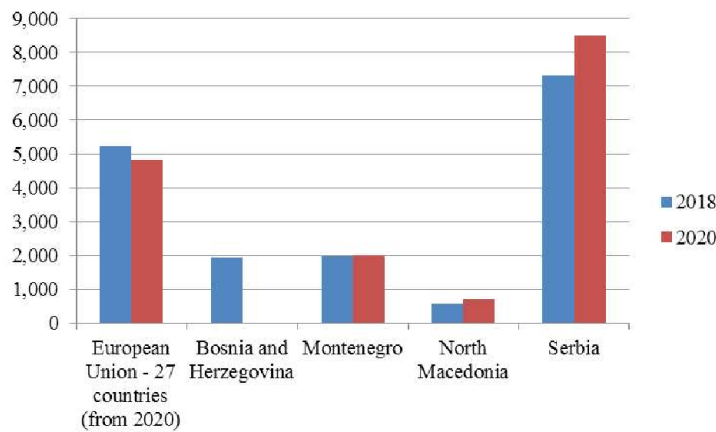
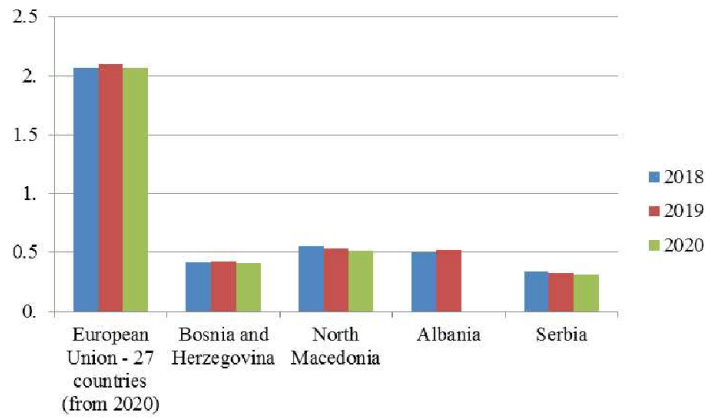
- Indicator Material import dependency.

Indicator Resource productivity (Production and consumption category) is defined as gross domestic product (GDP) divided by domestic material consumption. In the period 2018-2020, the average value for the EU was 2.07, while the value for the Western Balkan region was 0.44 Euro per kilogram, where the values for North Macedonia were 0.53, Albania 0.51, Bosnia and Herzegovina 0.41 and Serbia 0.32 (Chart 2). There is no available data for Montenegro.

Indicator Waste generation per capita (Production and consumption category) is defined as the total waste produced in the country, including large mineral waste, divided by the average population of the country”. In the period 2018-2020, the average value for the EU was 5,025 kilograms

per capita, while the value for the Western Balkan region was 3.114, where the values for Serbia were 7,909, Montenegro 1,986, Bosnia and Herzegovina 1,930 and North Macedonia had 633 kilograms per capita (Chart 3). There is no available data for Albania.

Charts 2 and 3.- Resource productivity and Waste generation per capita

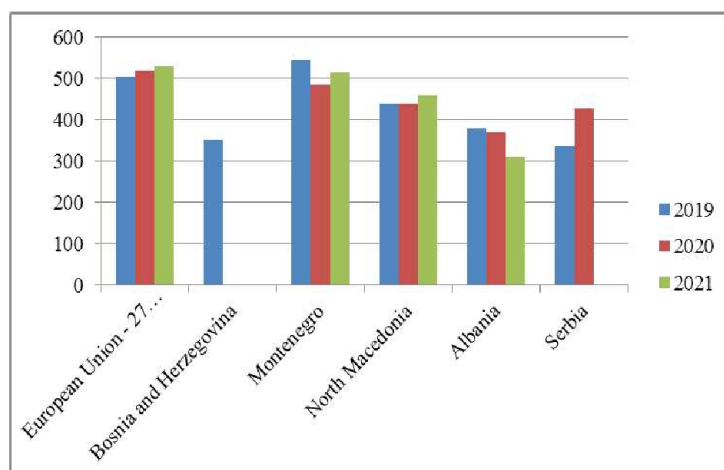
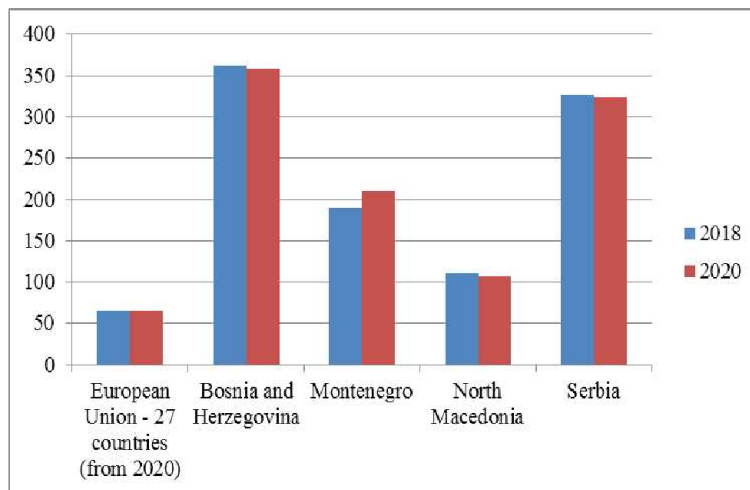


Source: Eurostat (2023a, 2023b).

Indicator Generation of waste excluding major mineral wastes per GDP unit) is defined as all waste generated in a country (in mass units), excluding major mineral wastes, per GDP unit. In the period 2018-2020, the average value for the EU was 66 kg per thousand euro, while the average value for the Western Balkan was 249 kg per thousand euro. The value for Bosnia and Herzegovina was 360, Serbia 326, Montenegro 200, and North Macedonia 109 kg per thousand euro (Chart 4). No available data for Albania.

Indicator Generation of municipal waste per capita is defined as measures of the waste collected by or on behalf of municipal authorities and disposed of through the waste management system. In the period 2019-2021, the average value for the EU was 518 kg per capita, while the average value for the Western Balkan was 410 kg per capita. The values for Montenegro were 515 kg per capita, North Macedonia 447, Serbia 383, and Albania 354, followed by Bosnia and Herzegovina 352 (Chart 5).

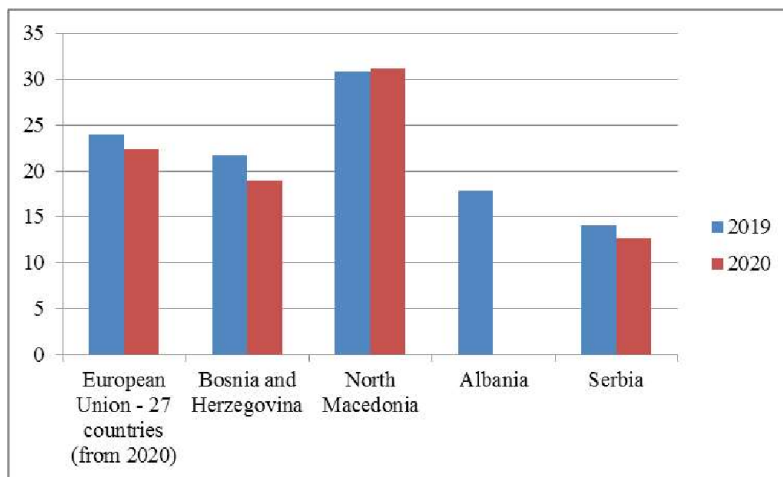
Charts 4 and 5 - Generation of waste excluding major mineral wastes per GDP unit and Generation of municipal waste per capita.



Source: Eurostat (2023c; 2023d).

Indicator Material import dependency is defined provides the ratio of imports (IMP) over direct material inputs (DMI) and shows the extent to which an economy relies upon imports to meet its material needs. In the period 2019-2020, the average value for the EU was 23%, while the average value for the Western Balkan was 21%. The value for North Macedonia was 31%, Bosnia and Herzegovina 20%, Albania 18%, and Serbia 13% (Chart 6). No available data for Montenegro.

Chart 6. - Material import dependency



Source: Eurostat (2023e).

CONCLUSION

Today, the circular economy is considered one of the solutions for sustainability, as one of the most important aspects of the European Green Deal, to replace the previous “linear economy”. CE can be defined as a regenerative system in which resources and waste are circulated, while emissions and energy leakage are minimized.

So far, the European Commission has adopted An EU action plan for the circular economy (2015), The New Circular Economy Action Plan “(2020), A set of two packages of proposals to encourage the circular economy (2022), and A third package of proposals (2023). All plans represent a big step towards the set goal and the main guidelines of the European Green Deal.

The strategy for the incorporation of the circular economy in the Western Balkan region refers to the inclusion of the goals and practices of the circular economy in all policies and sectors of the economy, while simultaneously raising the awareness of citizens and business representatives about the concept and all the benefits that the circular economy brings for the development of countries. Progress in compliance with waste management legislation is rather slow and limited in all Western Balkan countries, especially the implementation of the existing legal and political frameworks, which represents an even greater challenge. Regarding the strategy for the development of the circular economy in the region of the Western Balkans, it is necessary to establish a comprehensive framework that will include greater determination of decision makers, a strong legislative framework and policy, raising awareness among citizens and business representatives, as well as financial incentives to encourage the transition to a circular economy.

Eurostat uses five categories with indicators to monitor progress in the implementation of the circular economy, but data for the Western Balkans region is available for two categories Production and consumption and Global sustainability and resilience with specific indicators. The indicators of Productivity of resources, Production of waste per capita, and Production of municipal waste per capita show a higher level of the EU average compared to the region, while the Indicator of Waste generation excluding the main mineral waste per unit of GDP shows a higher number of new regional averages compared to the EU. The indicator Dependence on the import of materials shows almost the same value as this indicator, that is, which implies that there is potential for the progress of the region.

SAŽETAK

ZNAČAJ STRATEGIJA RAZVOJA CIRKULARNE EKONOMIJE U REGIONU ZAPADNOG BALKANA

Koncept cirkularne ekonomije je od početka izložen velikom broju kritika u naučnoj literaturi i praksi, koje se uglavnom odnose na shvatanje termina cirkularne ekonomije. Ipak, sam termin stvara ekonomske, ekološke i društvene koristi, iako ne postoji jasno definisana oblast merenja cirkularne ekonomije. Za sada je literatura definisala dve oblasti merenja, koje se sa jedne strane odnose na tehničke aspekte koncepta cirkularne ekonomije, dok se druga oblast merenja odnosi na održivost i intenzitet uticaja strate-

gije sprovođenja cirkularne ekonomije i njenu primenu. U poslednje vreme je na snazi Eurostat metodologija merenja razvijenosti cirkularne ekonomije. Tako je cilj ovog rada da ukaže na značaj strategije razvoja cirkularne ekonomije u regionu Zapadnog Balkana. Rad se sastoji iz tri dela. Prvi deo rada ukazuje na analizu dosadašnje strategije razvoja cirkularne ekonomije u Evropi. Drugi deo rada analizira strategiju razvoja cirkularne ekonomije u zemljama Zapadnog Balkana, dok treći deo rada prikazuje napredak u strategiji cirkularne ekonomije na Zapadnom Balkanu kroz merenje razvijenosti cirkularne ekonomije Eurostat indikatorima. Na kraju su data zaključna razmatranja autora.

KEYWORDS: strategija, održivi razvoj, cirkularna ekonomija, region, Zapadni Balkan

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