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Circular Economy in Serbia: process started

AMBASADORI ODRŽIVOG RAZVOJA I ŽIVOTNE SREDINE
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Executive Summary

The circular economy is now an irreversible, global mega trend. The circular economy process benefits resources (improving resource security and decreasing import dependency), the environment (less environmental impact), the economy (opportunities for economic growth and innovation), and society (sustainable consumer behavior and job opportunities). There are three key approaches to promote resource efficiency: 1) extended producer responsibility systems; 2) green public procurement, and 3) business partnerships along the value chain. Circular economy priority sectors include plastics, food waste, critical raw materials, construction and demolition, biomass, and bio-based products.

The transition to the circular economy is a complex, comprehensive, and — above all — long-term process. The circular transition process is a systemic process (rather than a one-off, finite document), where continuity in the implementation of agreed policy is crucial (especially for countries with economies in transition).

As an UN member state and EU membership candidate, Serbia is already committed to the circular economy concept. However, no integrated approach is in place yet and the environmental policy framework needs to be reinforced in key economic and sectoral policies.

This analysis (conducted as compilation of available information with some data limitations) relies on the following understanding of the circular economy:

The circular economy is one in which the value of products, materials, and resources is maintained in the economy for as long as possible, and waste generation is minimized. This is in contrast to the "linear economy," which is based on the "extract, make, and dispose" model of production and consumption.

At the UN level, the circular economy is increasingly being seen as a means of accelerating society's shift to a more resource-efficient system, thus improving competitiveness and responding to global environmental challenges. Outreach of analysis is that as much as the circular economy can help in achieving many Sustainable Development Goals targets, the Sustainable Development Goals can also help to promote circular economy practices. Increased collaboration is frequently highlighted as imperative for enabling the shift to the circular economy.

Since 2015, the EU saw a lot of developments take place in favor of the circular economy; however, missed loop pieces still exist.

Serbia is implementing initiatives that support the circular economy, already listed in the "Serbian National Profile 2018," prepared by the Serbian Environmental Agency for the EEA 2018 edition of the More from Less report[1] , as well as in the Study on Achievements and Perspectives towards a Green Economy and Sustainable Growth in Serbia[2]. Circular Economy Actions/Initiatives spread over time in Serbia are presented as the outreach of this assessment, and they should be considered as open-ended/open to additions, when and if identified.

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1 Resource efficiency and circular economy in Europe – even more from less , to update 2016 analysis http://www.sepa.gov.rs/download/publikacije/MoreFromLess_MaterialResourceEfficiencyEurope.pdf

2 https://sustainabledevelopment.un.org/content/documents/984serbia.pdf

A possible strategy for the way forward could benefit from this study, conducted primarily as the compilation of available information. Exercising legally prescribed procedures, some of possible ways forward are:

- Preparing the appropriate public policy paper for the circular economy that will provide guidelines for action
- Using the circular economy as a cornerstone of the industrial strategy
- Considering Initiatives to update and rethink the National Strategy for Sustainable Use of Natural Resources, possibly in the form of the National Sustainable Use of Natural Resources Plan;
- Updating the waste strategy, possibly in the form of the National Waste Management Plan
- Initiative to update and rethink Agenda 2030 (now in the form of the Voluntary National Report on Agenda 2030[3] , with the existing Shadow Report[4]), possibly in the form of the Plan for Agenda 2030 implementation
- Considering new appropriate legislation
- Building/strengthening and monitoring the effectiveness of multi-stakeholder coalition to foster the circular economy process
- Accelerating the dissemination of knowledge and awareness-raising about circular economy topics.

Given that resource efficiency, circular economy, and raw materials supply are multidisciplinary areas, responsibilities are shared between ministries; there is a need for better cooperation between them, as well as improving the systemic approach.

3 http://www.mdpp.gov.rs/doc/DNI-2019.pdf

4 In the final phase of development, it will be posted at www.ambassadors-env.com

1. Circular economy: The issues of definition and understanding

The Circular Economy is currently a popular notion within the policy and business advocacy groups. While there is no single accepted definition of the circular economy, it is generally understood as reduced demand for certain natural resources and materials that are derived from them. The resources that are usually emphasized are metallic and non-metallic minerals, fossil fuels, and various biotic resources (like forests, fish, and other biomass). At the latest stage, relatively little attention is given to other resources, such as water or land.

There is no commonly accepted definition for the circular economy. There are at least more than 100 [5] possible definitions of the circular economy and many different understandings of the concept persist. This is indicated by the rapid growth of peer-reviewed articles on the circular economy (more than 100 articles were published on the topic in 2016, compared with only about 30 in 2014[6]). In addition, many consultancy reports have been published.

Circular economy core principles [7]		Goals
Rs framework	4R —reduce, reuse, recycle, and recover (reduction of resource consumption, followed by material reuse)	The circular economy is not a strategy for quick wins; it is a long-term undertaking that benefits future generations: economic growth with environmental quality and social equity. Reference to sustainability and/or sustainable development [8]
Systems perspective	The need for changing the entire pattern of economy. Micro-systems perspective, meso-systems perspective, macro-systems perspective	

5 Julian Kirchherr, Denise Reike, Marko Hekkert, Conceptualizing the circular economy: An analysis of 114 definitions, Resources, Conservation and Recycling, Volume 127, p. 221-232, 2017

6 M. Geissdoerfer, et al., The circular economy – a new sustainability paradigm, J. Clean. Prod., 143 (2017), pp. 757-768

7 Coding framework, adapted from Julian Kirchherr, Denise Reike, Marko Hekkert, Conceptualizing the circular economy: An analysis of 114 definitions, Resources, Conservation and Recycling, Volume 127, p. 221-232, 2017

8 Concepts also supposed to operationalize sustainable development for businesses are the green economy and green growth concepts (UNEP, 2011; OECD, 2016)

Advanced proposals go beyond the 4R framework, for example, 9Rs (below)[9,10]

The 9R framework			
Increasing circularity	Smarter product use and manufacture	R0 Refuse	Make the product redundant by abandoning its function or by offering the same function with a radically different product
		R1 Rethink	Make product use more intensive (e.g., by sharing the product)
		R2 Reduce	Increase efficiency in product manufacture or use by consuming fewer natural resources and materials
	Extend product lifespan and parts	R3 Reuse	Reuse of the discarded product that is still in good condition and fulfils its original purpose by another consumer
		R4 Repair	Repair and maintenance of the defective product so it can be used for its original purpose
		R5 Refurbish	Restore the old product and update it
		R6 Remanufacture	Use discarded product parts in a new product with the same purpose
		R7 Repurpose	Use discarded product or its parts in a new product with a different purpose
	Useful application of materials	R8 Recycle	Process materials to obtain the same (high-grade) or lower (low-grade) quality
		R9 Recover	Incineration of material with energy recovery

Within this analysis[11], the authors are considering these different approaches to the circular economy concept and understand the circular economy as:

The circular economy is one in which the value of products, materials, and resources is maintained in the economy for as long as possible, while waste generation is minimized. This is in contrast to the "linear economy," which is based on the "extract, make, and dispose" model of production and consumption.

To underline: the circular economy is a concept and a process[12].

9 N. van Buren, et al., Towards a circular economy: the role of Dutch logistics industries and governments, Sustainability (2016), p. 647

10 J. Potting, et al., Circular Economy: Measuring Innovation in the Product Chain (2017) Available at http://www.pbl.nl/sites/default/files/cms/publicaties/pbl-2016-circular-economy-measuring-innovation-in-product-chains-2544.pdf

11 This document is updated and extended 2018 Spotlight Report on Circular Economy in Serbia, prepared for the EU-funded project: ENV.Net Factoring the Environmental Portfolio for WB and Turkey in The EU Policy Agenda. Authors: Anđelka Mihajlov, Aleksandra Mladenović and Filip Jovanović, supported by the EASD Team

12 Mihajlov A., Circular Economy Concept: is the loop closed? Plenary at PIMB Conference – Circular economy – chance for sustainable development, Zrenjanin, Serbia , April 2019

2. Introduction: The need for circular economy

The transition to the circular economy is a complex, comprehensive and — above all — long-term process. It is a scenario for societies to transition away from unsustainable linear economies that ultimately deplete finite resources.[13]

The 2019 Circularity Gap Report[14] notes that, of the 92.8 billion tonnes of biomass, fossil fuels, metals, and minerals that enter the global economy annually, only nine percent are re-used.

Some negative effects and resource uses are[15] :

- Global demand for food is expected to grow by about 70% between 2005 and 2050;
- The US Geological Survey estimates that 80 years of phosphorus reserves are left;
- Only 2% of plastic in the world goes back to the original quality;
- Europe currently loses around 600 million tonnes of waste material, which could potentially be recycled or reused;
- Total demand for limited resource stocks (biomass, fossil energy, and many metals) is expected to reach 400% overuse of the Earth's total capacity by 2050;
- 70% of the fish that are caught are not eaten;
- At the current rate of production, the global oil reserves are predicted to last for 46.2 years, coal reserves for another 188 years, and natural gas reserves for another 55 years;
- Estimates are that air pollution will cause six to nine million premature deaths annually and cost 1% of the global gross domestic product by 2060.

Circular economy ***action areas*** include production, consumption, waste management, secondary raw materials, and innovation, investigation, and monitoring.

Circular economy ***priority sectors*** include plastics, food waste, critical raw materials, construction and demolition, biomass, and bio-based products. There are three key approaches to promoting resource efficiency: 1) extended producer responsibility systems; 2) green public procurement, and 3) business partnerships along the value chain.

Some ***enablers*** of the circular economy are: innovative business models, eco-design, extending the product lifetime through reuse and repair and waste management. ***Key drivers***[16] are legislation, green taxation, business drivers, and commodity prices and raw material shocks.

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13 Mihajlov A., et al, Scoping the future trends in natural resources availability using selected indicators as measures of progress: the links with interests and values, Conference: 7th CONGRESS OF ENVIRONMENTAL MANAGEMENT - X CONVENCIÓN INTERNACIONAL SOBRE MEDIO AMBIENTE Y DESARROLLO, CD Proceedings (ISBN 978-959-300-073-4), paper GA-002At: Havana, Cuba, 2015

14 Launched at the World Economic Forum (WEF) in January 2019

15 https://www.ellenmacarthurfoundation.org/circular-economy/what-is-the-circular-economy

16 Circular economy: Resources and opportunities, ISWA 2015

3. Global: UN level

At the UN level, the circular economy is increasingly being seen as a means of accelerating society's shift to a more resource-efficient system, thus improving competitiveness and responding to global environmental challenges[17]. China and the USA, the world's largest greenhouse gas emitters and resource consumers, have also recently recognized the opportunities provided by the circular economy.

In 2019, the final UNEP[18] resolution, inter alia, invites Member States to consider approaches and polices to achieve sustainable consumption and production, including but not limited to resource efficiency and circular economy, and to take into account the outcomes of the GEO-6 report[19] and the Global Resources Outlook 2019 (Global status and trends on natural resources 1970–2017)[20] . The presented projections by 2060 on natural resource use and impacts have two scenarios: Historical Trends and Towards Sustainability.

The resolution also invites all Member States, among others, to develop sustainable public procurement policies and update their public procurement legal frameworks in line with Sustainable Development Goal target 12.7 (promote public procurement practices that are sustainable, in accordance with national policies and priorities). Also, the resolution encourages Member States to:

- use incentives and other market-based instruments to support Sustainable Consumption and Production;
- promote the development and uptake of innovative sustainable business models with relevant stakeholders; and
- include manufacturers and retailers with relevant stakeholders, to enhance their collaboration to enable consumers and public authorities to make informed choices.

The 2019 World Resources Forum was centered on Closing Loops: Transitions at Work; this includes the transition to the circular economy through the lenses of cities and regions, food and bio-based materials, industry 4.0[21], soil and land use, finance, climate policy, and waste and materials management.

3.a. The circular economy and the Sustainable Development Goals

In terms of direction, the links between the Circular Economy and Sustainable Development Goals agendas are obvious. With the Rio+20 (2012) Conference on Sustainable Development, governments decided to develop global Sustainable Development Goals, building on the Millennium Development Goals but also including issues such as natural resources management, sustainable consumption and production, effective institutions, good governance, the rule of law, and peaceful societies. On 1 January 2016, the 17 Sustainable Development Goals (SDGs) of the

17 EMF, "Growth Within: A Circular Economy Vision for a Competitive Europe," Ellen MacArthur Foundation, 2015. Available at: https://www.ellenmacarthurfoundation.org/assets/downloads/publications/EllenMacArthurFoundation_GrowthWithin_July15.pdf.

18 UNEP/EA.4/L.2 (UNEA 2019)

19 GEO-6 Report https://www.unenvironment.org/resources/global-environment-outlook-6

20 Global Resources Outlook 2019 https://www.resourcepanel.org/reports/global-resources-outlook

21 See for example S. Rajput and S. Prakash Singh, Connecting circular economy and industry 4.0, International Journal of Information Management Volume 49, December 2019, Pages 98-113

2030 Agenda for Sustainable Development[22] — adopted by world leaders in September 2015 at the UN Summit — officially came into force. It links the three pillars of sustainable development — economic, social, and environmental — in a balanced manner, intertwining them through the 17 sustainable development goals, which must be fulfilled by 2030.

However, the term "circular economy" does not appear in the 2030 Agenda for Sustainable Development, where the Sustainable Development Goals and associated targets[23] are set forth. An exploratory matching exercise and relationship assessment using a simple relationship assessment grid to determine the qualitative relationship between circular economy practices and the 169 Sustainable Development Goals targets[24] are presented in Table below.

Overall relationship scores of CE practices and 169 targets of the SDGs Note: CE = circular economy; SDGs = Sustainable Development Goals						Comment
Goal	Direct contribution of CE practices to achieve target	Indirect contribution of CE practices to achieve target (e.g., via other SDGs)	Achieving target will contribute toward CE	Weak or no link	Cooperation opportunities for CE promotion	
SDG 1 No Poverty	**0**	**4**	**1**	**1**	**1**	Adoption of CE practices, such as repair, remanufacturing, and recycling can lead to job creation, which indirectly contributes to poverty reduction. Also, CE practices (e.g., those related to water management and agriculture) also build resilience. There are strong synergies with SDGs 8 and 9.
SDG 2 Zero Hunger	**1**	**3**	**3**	**0**	**1**	Implementing CE principles in local agriculture (e.g., composting and diversified integrated farming practices) improves soil, which increases farm productivity and system resilience. Combined with circular food system initiatives that reduce food waste and/or cascading of food-waste into animal feed can free up farm-land for human-consumption.
SDG 3 Good Health and Well-being	**1**	**0**	**0**	**11**	**1**	Possible indirect contribution of CE to health, well-being, and reduced child mortality through decreased pollution and better water treatment, for example. On the other hand, there is also potential trade-off with CE practices such as waste recycling.
SDG 4 Quality Education	**0**	**0**	**5**	**3**	**2**	Several of the targets related to e.g. equal access to technical, vocational, and tertiary education — in particular when combined with focus on CE, systems thinking, design for circularity, entrepreneurship, and innovation — are fundamental for enabling circular practices.

22 https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E

23 The seventeen goals and associated 169 targets are increasingly being adopted by both public and private sector actors across the globe, as a framework for organizing and pursuing sustainability initiatives

24 P. Schroeder, K. Anggraeni, and U. Weber, "The Relevance of Circular Economy Practices to the Sustainable Development Goals," J. Ind. Ecol., vol. 23, no. 1, pp. 77–95, 2018.; and paper interpretations

	SDG 5 Gender Equality	0	0	2	6	1	Such as related to eliminating discrimination, violence and harmful practices against women and girls and targets to enhance their empowerment. Achieving targets on ensuring women's participation in leadership positions and equal rights to ownership and control over land and other resources has the potential to facilitate CE practices and associated entrepreneurship.
	SDG 6 Clean Water and Sanitation	4	1	0	0	3	CE practices such as small-scale water purification, sustainable sanitization, waste water treatment, water reuse and recycling, nutrient recovery, biogas systems, etc. can help increase access to safe drinking water and equitable sanitation, reduce pollution, and improve water quality.
	SDG 7 Affordable and Clean Energy	3	1	0	0	1	Renewable energy systems, including small-scale biomass technology and second-generation biofuels, energy (heat) recovery, and improved utilization in industrial systems (e.g., industrial symbiosis)
	SDG 8 Decent Work and Economic Growth	2	3	4	1	2	New (circular) business models are a major possible source of increased resource effectiveness and efficiency, waste valorization, and green jobs.
	SDG 9 Industry, Innovation and Infrastructure	2	0	6	0	0	Contribute directly to retrofitting industries to make them more resilient and sustainable. This includes new infrastructure, such as for renewable energy, circular water and waste/resource management, reverse logistics, support to research and innovation, as well as ensuring access to suitable financing.
	SDG 10 Reduced Inequalities	0	1	4	4	1	Social and economic inclusion has strong synergies with promoting safe working environments — important for informal waste sector workers in developing countries. This also relates to equal representation of developing countries in international collaboration, equal access to technical support and financing for CE and ensuring that trade agreements facilitate rather than counteract equitable distribution and circular flow of resources
	SDG 11 Sustainable Cities and Communities	1	3	3	2	1	Transition to the circular economy is imperative for reducing cities' resource and environmental impacts. Also, CE principles such as modular, adaptable and flexible building design can help enable access to housing for low-income groups, including reducing deaths and impact from disasters and water related disasters, and ensuring access to green and public spaces.
	SDG 12 Sustainable Consumption and Production	3	5	2	0	1	CE practices are all about decoupling economic activity from resource use and associated environmental and social impacts, which is also very much at the heart of this goal. This goal is an important enabler for achieving most of the other SDGs, making the indirect impact of CE practices even more profound.

	SDG 13 Climate Action	**0**	**1**	**3**	**0**	**1**	The 2019 Circular Gap Report finds that implementing CE practices could reduce GHG emissions by more than a third by 2100, in addition to existing low-carbon technologies. Additionally, achieving targets on climate-related policies at national, regional or local levels, incentives, financing mechanisms and increased climate awareness are likely to facilitate the uptake of CE practices.
	SDG 14 Life below Water	**1**	**2**	**3**	**1**	**3**	Preventing waste generation and leakages from land-based activities through CE practices will directly reduce waste entering the oceans. This also includes recovery of nutrients from waste water streams before entering oceans. Additionally, CE contribution to tackling climate change will indirectly reduce ocean acidification.
	SDG 15 Life on Land	**3**	**3**	**1**	**1**	**4**	At the core of CE practices is the aim to restore natural capital. This involves adopting sustainable and regenerative agricultural and agroforestry practices that embrace and protect biodiversity and return biological material back to soils as nutrients — which is fundamental for restoring terrestrial ecosystems.
	SDG 16 Peace, Justice and Strong Institutions	**0**	**1**	**6**	**5**	**0**	Improved and more equitable access to basic resources and increased resilience of natural systems, aided by CE practices, contribute to environmental justice and can help indirectly avoid environmentally triggered social conflicts. Additionally, stronger institutions, reduced corruption and more transparency will help enable CE practices — such as creating healthy markets for waste resources for reuse and recycling.
	SDG 17 Partnership for the Goals	**0**	**0**	**9**	**0**	**10**	Achieving targets relating to debt relief for developing countries, more equitable free trading systems and agreements, enhanced macroeconomic stability, enhanced global policy on sustainability and developing countries' access to technical support can all facilitate CE practices
	Summary	**21**	**28**	**52**	**35**	**33**	

Outreach of analysis is that as much as the circular economy can help in achieving many Sustainable Development Goals targets, the Sustainable Development Goals can also help to promote circular economy practices. Increased collaboration is frequently highlighted as imperative for enabling the shift to circular economy.

4. The EU action plan for the circular economy

The EU's action plan for the circular economy strives for a sustainable, low-carbon and competitive economy, which is resource-efficient. The action plan determines measures to influence production, consumption and waste management and the secondary resource market.

In 2015, the European Commission[25] presented its Circular Economy Package, which strived for improved cost-efficiency, better balance of current accounts, increased self-sufficiency, new jobs and climate targets. In the European Union context, the circular economy is currently part of the European Commission's agenda for jobs, growth and investment.

Design stands at the beginning of product lifecycle as essential for ensuring circularity. With the implementation of the Eco-design Working Plan 2016–2019, the Commission has further promoted the circular design of products, together with energy efficiency objectives. The Commission has tasked the European Standardization Organizations with developing horizontal criteria to measure durability, reusability, reparability, recyclability and the presence of critical raw materials. These criteria should be applied in existing and new standards. Information on product durability and repairability[26] can also shift purchasing decisions towards more sustainable choices. The Commission has introduced circularity aspects (energy consumption and material use, waste prevention, recycling and reduction of hazardous chemicals) in Best Available Techniques Reference Documents (BREFs)[27] under the Industrial Emissions directive[28], turning them into reference standards for Member States when granting permits for industrial plants. In addition, the result of the fitness check of the Environmental Management and Audit Scheme (EMAS) confirmed its potential to improve organizations' environmental performance. Furthermore, the Commission has proposed to reinforce the protection of consumers against false environmental claims and premature obsolescence practices[29] through better opportunities for individual and collective redress against unfair commercial practices[30]. To reap public authorities' potential to boost markets for circular products and services, the Commission has adopted the new and revised EU Green Public Procurement criteria including circular economy aspects and promoted their uptake through guidance documents[31] and training sessions. The Commission is leading by example in its own procurement[32].

The last three Annual Growth Surveys (2016, 2017 and 2018) acknowledge the political commitment of the European Commission to the transition to the circular economy, with a particular focus on investment. In March 2018, the Commission adopted its strategy on sustainable finance with the aims to redirect capital flows towards a more sustainable economy. In May 2018, the new EU-wide rules became: 1) adopted on waste management and recycling, 2) proposed on single-use plastic products, and 3) proposed on water reuse. The Europe-wide EU Strategy for

25 https://ec.europa.eu/environment/circular-economy/index_en.htm

26 European Commission, Behavioural Study on Consumers' Engagement in the Circular Economy, October 2018

27 Common Waste Water and Waste Gas Treatment / Management systems in the chemical sector (6/2016), Intensive Rearing of Poultry or Pigs (7/2017), Large Combustion Plants (7/2017), Production of Large Volume Organic Chemicals (12/2017) and Waste Treatment (8/2018)

28 Directive 2010/75/EU

29 Further knowledge on the nature of premature obsolescence practices as well as on how to address them will be gathered through a four-year Horizon 2020 independent testing programme running until 2023

30 Revision of the Consumer Protection Cooperation Regulation and the legislative proposals under the New Deal for Consumers

31 http://ec.europa.eu/environment/gpp/pubs_en.htm

32 http://ec.europa.eu/environment/emas/pdf/other/2018%2012%2007_ES%202018_Consolidated%20Volume.pdf

Plastics in the Circular Economy have an annex to transform the way plastic and plastic products are designed, produced, used and recycled. By 2030, all plastic packaging should be recyclable.

Environmentally sound management of waste, inside and outside the EU, is key to achieving a more circular economy. The revised legislative framework on waste has entered into force in July 2018. It sets clear targets for reduction of waste and establishes an ambitious and credible long-term path for waste management and recycling. Key elements of the revised waste proposal include:

- A common EU target for recycling 65% of municipal waste by 2035;
- A common EU target for recycling 70% of packaging waste by 2030;
- There are also recycling targets for specific packaging materials:
  - Paper and cardboard: 85%
  - Ferrous metals: 80%
  - Aluminum: 60%
  - Glass: 75%
  - Plastic: 55%
  - Wood: 30%
- A binding landfill target to reduce landfill to maximum 10% of municipal waste by 2035;
- Separate collection obligations are strengthened and extended to hazardous household waste (by end 2022), bio-waste (by end 2023), textiles (by end 2025).
- Minimum requirements are established for extended producer responsibility schemes to improve their governance and cost efficiency.
- Prevention objectives are significantly reinforced, in particular, requiring Member States to take specific measures to tackle food waste and marine litter as a contribution to achieve EU commitments to the UN SDGs.

The EU Monitoring Framework for the Circular Economy[33] shows that the transition has helped put the EU back on the path of job creation. The Circular Economy Action Plan is fully completed. Its 54 actions have been delivered, although the work on some of them will continue beyond 2019.

33 *COM (2018) 29 final*

Selected Circular Economy Initiatives Across time, region-related [34]

Year	Name of Initiative	Origin	Level	Type
2008	Recommendation of the Council on Resource Productivity	OECD	Multilateral	Policy
2011	Roadmap for Resource Efficient Europe	EC	Multilateral	Policy
2014	Commission Regulation (EU) 1357/2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of Council on waste and repealing certain Directives	EC	Multilateral	Policy
2015	2030 Agenda for Sustainable Development	UN	Multilateral	Policy
	Closing the Loop – An EU Action plan for the Circular Economy	EC	Multilateral	Policy
2016	Finish road map to circular economy 2016-2025	Finland	National	Policy
2018	A European Strategy for a Plastics in Circular Economy	EC	Multilateral	Policy
	Circular Economy Opportunities Programme	UNIDO	National	Dialogue
	France's Roadmap for Circular Economy	France	National	Policy
	Roadmap towards the Circular Economy in Slovenia	Slovenia	National	Policy
	EU Proposal on Water Reuse	EC	Multilateral	Policy
	Strategy for Circular Economy	Denmark	National	Policy

According to the European Environment Agency (EEA) report[35] published in October 2019, circular economy initiatives in Europe are still at early stages and they would benefit from more investments in upscaling promising innovations and monitoring progress towards circularity. EEA circular economy indicators are within the four groups: production and consumption, waste management, secondary raw materials and competitiveness and innovation.

The current Finnish Presidency (the second half in 2019) launched European Days for Sustainable Circular Economy (September 30th–October 1st, 2019), presenting a strong interest in the topic. In particular, focus was placed on topics related to eco-innovation, chemicals and plastic, waste, water management, marine pollution and urban environmental best practices. These issues offer a wide area for further bilateral discussions, not least because they have great potential for innovative business solutions.

34 Extracted from An Inclusive Circular Economy: Priorities for Developing Countries, research paper by Felix Preston, J.Lehne and L.Wellesley, Chatham House, May 2019

35 https://www.eea.europa.eu/publications/circular-economy-in-europe-insights

5. Circular economy unresolved challenges

The circular economy is now an irreversible, global mega trend. Yet, much is still needed to scale up action globally, fully close the loop and reap the competitive advantage it brings to businesses. The transition from the linear to circular economy requires a joint effort by stakeholders from all sectors. Companies can contribute to the transition by developing competencies in circular design to implement product reuse and recycling, and serving as trend-setters of innovative circular economy business models. Policy-makers can support the transition by promoting the reuse of materials and higher resource productivity by rethinking incentives and providing the right set of policies and access to financing.

The circular economy should be a cornerstone of industrial strategy, enabling circularity in new areas and sectors, while product lifecycle assessments should become the norm and the eco-design framework should be broadened as much as possible. The circular economy is r***elevant for all sectors of the economy*** (the food industry, the textile industry, the chemical industry, wastewater management, waste management), and for ***achieving a number of SDGs*** (not only sustainable consumption and production).

A snapshot analysis of the circular economy missed loop pieces is identified and listed[36]. Some of the issues are: 1) the interface between chemical, product and waste legislation that assesses how the rules on waste, products and chemicals relate to each other[37]; 2) plastic and critical resources, such as rare-earth and other precious metals as well as phosphorus (27 critical materials); 3) investment and other horizontal measures and indicators, which will measure progress in these areas.

Fundamental challenges to the circular economy that demand attention are:

- the existing economic model which does not value natural capital, nor internalize externalities of measures taken (e.g., price negative and reward positive social and environmental impacts);
- the lack of incentives for companies to design more circular products and use secondary raw materials;
- products, materials and substances on the market contain banned substances of concern, either because they were introduced before being banned or due to the lack of enforcement of the EU REACH mechanism[38];
- information that does not accompany products and materials, hampering circular practices like maintenance, reuse, repair and recycling;
- the overload or lack of information on products, complicating consumers' ability to make sustainable choices;
- the misalignments in (EU) chemicals, product and waste legislation, and the presence of certain chemicals, hampering efforts to recycle and re-use products;
- the insufficient quality criteria for secondary materials and lack of demand for recycled materials, like plastic;

36 Mihajlov A., Circular Economy Concept: is the loop closed? Plenary at PIMB Conference – Circular economy – chance for sustainable development, Zrenjanin , April 2019

37 The European Chemical Agency is setting up a database to gather information and to improve knowledge about substances of concern in products and in products when they become waste.

38 https://ec.europa.eu/environment/chemicals/reach/reach_en.htm

- the lack of common definitions for waste, and hazardous waste hinder shipments of waste across (member) states;
- illegal waste burning or shipments, different levels of ambition (across the EU) in reducing landfills and meeting the agreed recycling targets, and the overall underdeveloped waste management infrastructure;
- the global market and value chains which complicate policy steering (at the EU level).

The 2019 Circularity Gap Report[39] identifies four actions to bridge the gap:

- translating global trends to national, regional and commercial pathways;
- developing decision metrics and a measurement framework;
- facilitating peer-to-peer learning; and
- building a global coalition for action.

Limitations include insufficient attention to circular economy implementation, in particular in countries with transitioning economies.

6. Circular economy in Serbia

As the UN member state and EU membership candidate, Serbia is already committed to the circular economy concept[40]. ***Transition to the circular economy will help Serbia (and the region) to meet its international (and EU) commitments***. Although conferences and workshops in Serbia have been held on the circular economy ***since 2002*** (the Workshop on Sustainable Consumption Opportunities, co-organized by the Serbian ministry for the environment and UNEP in March 2002 in Belgrade; and, among others, Conference EnE16 "Environment to Europe" Belgrade, June 2016; Conference Circular Economy as a development opportunity for Serbia, Belgrade, November 2016, organized by the OSCE Mission in Serbia, the German Agency for International Cooperation GIZ, Serbian Chamber of Commerce and the Ministry for Environmental Protection; ISWA World Congress 2016, Novi Sad "Circular Economy as an Opportunity to Improve Waste Management"), it is necessary to intensify work in this field. Also, research interest in the topic of circular economy and waste management exists (examples[41,42]).

Not too much attention on the circular economy in Serbia; however, the trend is growing. This conclusion is based on separate research within the ENV.net3 project (performed by Environmental Ambassadors for Sustainable Development and implemented by Ebart media archive, Belgrade) on nexus environmental issues-media in Serbia. Bellow outreach data are presented (until June 30, 2019):

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39 Launched at the World Economic Forum (WEF) in January 2019

40 Mihajlov A., SUSTAINABLE DEVELOPMENT GOALS IMPLEMENTATION-EU ACCESSION INTERFACE IN THE CONTEXT OF THE WESTERN BALKAN MORE EFFICIENT AND COHERENT SUSTAINABLE DEVELOPMENT PATHWAYS, Conference: HUMBOLDT-KOLLEG „Sustainable Development and Climate Change: Connecting Research, Education, Policy and Practice", At: Belgrade, 2018, In the Book of Abstracts http://www.humboldt-serbia.ac.rs/kolleg2018/pics/Humbolt-2018.pdf

41 Mihajlov A. and H.Stevanovic Carapina, Rethinking waste management within the resource-efficient concept, Environmental engineering and management journal 14(2):2973-2978 , 2015

42 Carapina Stevanovic H, and A.Mihajlov, U susret konceptu cirkularne ekonomije : uloga sistema upravljanja otpadom, Međunarodna konfrencija : otpadne vode, komunalni čvrsti otpad, Zbornik radova, s.171-177; ISBN 978-86-82931-68-3At: Budva, Montenegro, Volume: I Opasan otpad, rad po pozivu, 2015

Number of articles with term "circular economy" in written media in Serbia								
2011	2012	2013	2014	2015	2016	2017	2018	2019 (1st half)
0	2	3	5	18	20	21	40	30

The mapping the "state of the art" of the Circular Economy in Serbia entails the identification of what is present (and if possible, which are the main obstacles that may hamper the shift to the circular economy paradigm).

In Serbia, the Serbian Environmental Protection Agency (SEPA) and the Statistical Office of the Republic of Serbia calculate and publish indicators related to resource efficiency. Valuable data are available in EU Serbia Progress/Annual Reports[43]. In addition, some relevant data are available in the OECD report on Environmental Policy in South East Europe[44]. It is evident that at present, ***there are limited sources of reliable information and data*** that provide such information. Still though ***no policy instruments in Serbia are directed towards the circular economy.***

6.a. Mapping policy documents

The compilation on circular economy activities until 2017 in Serbia is presented in "Serbian National Profile 2018" prepared by the Serbian Environmental Agency for the EEA 2018 edition of the *More from Less report* [45].

The Serbian headline indicators on material resources use are[46]: domestic material consumption (DMC), its breakdown by resource type (biomass, fossil fuels, non-metallic minerals and ore metals), in absolute terms and per person; resource productivity (GDP/DMC); domestic extraction used (DEU); direct material input (DMI); physical trade balance (PTB). ***Serbian Environmental Protection Agency*** (SEPA) is responsible for reporting on the state of the environment in the Republic of Serbia (SOER). Reporting is based on the National List of Indicators (NLI), adopted in 2011. The NLI is annually updated and published on the Agency's website[47]. Serbia is in the process of establishing the institutional framework and for monitoring the achievement of sustainable development goals[48]. In November 2018 the Group for Circular and Green Economy was established within the ***Ministry of Environmental Protection***, followed by the 2019 establishment of the Multisectoral Working Group for Circular Economy (representatives from 17 different institutions, ministries and other relevant organizations).

There is no specific strategic document on the circular economy in Serbia. The most relevant policy documents are listed in the table below. We are structuring assessment by following the logic and structure of the circular economy action plan [49].

43 http://www.mei.gov.rs/eng/documents/eu-documents/annual-progress-reports-of-the-european-commision-for-serbia

44 https://www.oecd-ilibrary.org/development/competitiveness-in-south-east-europe/environmental-policy-in-south-east-europe_9789264298576-18-en

45 Resource efficiency and circular economy in Europe – even more from less , in the process of updating document from 2016 http://www.sepa.gov.rs/download/publikacije/MoreFromLess_MaterialResourceEfficiencyEurope.pdf . Contributions to the drafting of this document were also made by the Chamber of Commerce and Industry of Serbia; Cleaner Production Centre of Serbia; Environmental Ambassadors for Sustainable Development; Ministry of Economy; Ministry of Environmental Protection; Ministry of Mining and Energy; Provincial Secretariat for Energy, Construction and Transport; Republic Secretariat for Public Policies; Republic Water Directory; and Serbian Environmental Protection Agency. 2016 final report available at https://www.eea.europa.eu/publications/more-from-less

46 http://webrzs.stat.gov.rs/WebSite/public/ReportView.aspx (English)

47 http://indicator.sepa.gov.rs/nacionalna-lista-indikatora (Serbian); Indicators related to waste management are located within the National Pollutant Source Register, and are available at: http://www.sepa.gov.rs/index.php?menu=20173&id=20006&akcija=ShowAll (Serbian)

48 http://sdg.indikatori.rs/en-US/

49 COM(2018)29 final

No	Name	Relevance	EU levers (examples)	Initial systematization/mapping of key policy documents in relation to the circular economy in Serbia (Note: analysis performed in November 2019)
Production and consumption				
1	EU self-sufficiency for raw materials	The circular economy should help to address the supply risks for raw materials, in particular critical raw materials.	• Raw Materials Initiative; Resource Efficiency Roadmap	-National Strategy of Sustainable Use of Natural Resources and Goods, 2012–2022[50] -Industrial Development policy and strategy[51] 2011–2020 - Spatial Plan for the Republic of Serbia[52] 2010–2020 - Strategy for Agriculture and Rural Development[53] for the period 2014–2024. -Public Financial Management Reform Program[54] 2016–2020 - Water Management Strategy of the Republic of Serbia[55] for the period 2016–2034 -National Programme for the adoption of the acquis 2018–2021 -Third Revision, 2018 -Economic Reform Programme (ERP)[56] for the Period 2019–2021 -Public Procurement Act (2015) There is a number of strategies developed for the end of 2019 – ending in one month from now, such as: -Waste Management Strategy[57] 2010–2019 -National Program for Environmental Protection, adopted in 2010 for a ten-year period until 2019[58] -Strategy for Biological Diversity in the Republic of Serbia for 2010–2019 To note developed strategy: -Strategy for Implementing the Convention on Access to Information, Public Participation in Decision-making, and Access to Justice in Environmental Matters — Aarhus Convention.
2	Green public procurement*	Public procurement accounts for a large share of consumption and can drive the circular economy.	• Public Procurement Strategy; EU support schemes and voluntary criteria for green public procurement	
3a-c	Waste generation	In a circular economy waste generation is minimized.	• Waste Framework Directive; directives on specific waste streams; Strategy for Plastics	
4	Food waste*	Discarding food has negative environmental, climate and economic impacts.	• General Food Law Regulation; Waste Framework Directive; various initiatives (e.g. Platform on Food Losses and Food Waste)	

50 (Covers mineral resources, RES, forests and their resources, protected areas, biodiversity, landscape diversity, fish, water and land resources). The Strategy should be implemented through plans and programs for each of the natural resources, to be adopted by the Government, and therefore no quantified targets.

51 Goals of the Strategy and Policy of Industrial Development 2011–2020 (2011) that are relevant to material resource efficiency, the circular economy and raw material supply relate to the safer and higher-quality exploitation of mineral raw materials for the sake of security of supply to industry; incentives for cleaner production; development of infrastructural systems; improving energy efficiency; and encouraging innovation, research and development. Measures and activities are given in the Action Plan for Implementing the Strategy and Policy of Industrial Development. A new Industrial Development Strategy for Serbia is in preparation

52https://www.mgsi.gov.rs/sites/default/files/ZAKON%20O%20PROSTORNOM%20PLANU%20RS%20OD%202010%20DO%202020.pdf (Serbian)

53 Among the development goals of the Strategy on Agriculture and Rural Development of the Republic of Serbia (2014–2024) is the sustainable management of resources. On the theme of preservation of natural resources, the operational objectives relate to the establishment and promotion of an integrated production system, awareness raising on the importance of using renewable energy sources and the production of energy crops.
Website: http://www.mpzzs.gov.rs/wp-content/uploads/datoteke/razno/4827014.0116.30-1.pdf (Serbian)

54 https://www.mfin.gov.rs/pages/article.php?id=10756

55 The Strategy for Water Management in the Republic of Serbia up to 2034 (2016) is a comprehensive planning document determining national long-term water management policy, that is, action for sustainability in the areas of water use, water protection, the regulation of water flow and protection against the harmful effects of water. In the planning period, a significant improvement in the water sector, which is relevant for resource efficiency, will focus on reducing water leakage, reducing inefficiency in water use and recovering substances and energy from used water.Website: http://www.rdvode.gov.rs/doc/Strategija_FINAL.pdf (Serbian)

56 https://www.mfin.gov.rs/pages/article.php?id=10923

57 The New/ Updated Waste Management Strategy 2019–2025, along with the National Plan for Waste Management and the Programme for Waste Prevention, will be developed with support from the Twinning Project, Support to National Waste Management Policy. Development began in 2017 and was expected to take two years to complete. In the new regulations, strategic measures include: measures for reducing waste disposal; measures to encourage separate collection; design, transport, use and disassembly. A part of the new Strategy will specifically focus on raw materials and the circular economy. Source:http://www.pks.rs/SADRZAJ/Files/Strategija%20upravljanja%20otpadom%20za%20period%20%202010%20-%202019%20godine.pdf(Serbian). Note: still not prepared

58 (Action Plan for Implementation of the National Environmental Protection Program prepared in 2014)

Waste management				
5a-b	Overall recycling rates	Increasing recycling is part of the transition to a circular economy.	• Waste Framework Directive	-National Strategy of Sustainable Use of Natural Resources and Goods, 2012–2022 -Industrial Development policy and strategy 2011–2020 - Spatial Plan for the Republic of Serbia 2010–2020 -National Programme for the adoption of the acquis 2018–2021 -Third Revision, 2018 -Economic Reform Programme (ERP) for the Period 2019–2021 There is also a number of strategies, developed for the end of 2019 – ending in one month from now, such as: -Waste Management Strategy 2010–2019 -National Program for Environmental Protection, adopted in 2010 for a 10-year period until 2019
6a-f	Recycling rates for specific waste streams	This reflects the progress in recycling key waste streams.	• Waste Framework Directive; Landfill Directive; directives on specific waste streams	
Secondary raw materials				
7a-b	Contribution of recycled materials to raw materials demand	In a circular economy, secondary raw materials are commonly used to make new products.	• Waste Framework Directive; Eco-design Directive; EU Ecolabel; REACH; initiative on the interface between chemicals, products and waste policies; Strategy for Plastics; quality standards for secondary raw materials	-National Strategy of Sustainable Use of Natural Resources and Goods, 2012–2022 -Industrial Development policy and strategy 2011–2020 - Spatial Plan for the Republic of Serbia 2010–2020 -National Programme for the adoption of the acquis 2018–2021 -Third Revision, 2018 -Economic Reform Programme (ERP) for the Period 2019–2021 - Rulebook on the eco-label, 2016 There is also a number of strategies, developed for the end of 2019 — ending in one month from now, like: -Waste Management Strategy 2010–2019 -National Program for Environmental Protection, adopted in 2010 for a 10-year period until 2019
8	Trade in recyclable raw materials	Trade in recyclables reflects the importance of the internal market and global participation in the circular economy.	• Internal Market policy; Waste Shipment Regulation; Trade policy	
Competitiveness and innovation				
9a-c	Private investments, jobs and gross value added	This reflects the contribution of the circular economy to the creation of jobs and growth.	• Investment Plan for Europe; Structural and Investment Funds; InnovFin; Circular Economy Finance Support Platform; Sustainable Finance Strategy; Green Employment Initiative; New Skills Agenda for Europe; Internal Market policy	A good sign in Serbia is the number of ISO 14001 certificates (almost 1200 in 2016). -National Strategy of Sustainable Use of Natural Resources and Goods, 2012–2022 -Industrial Development policy and strategy 2011–2020 -National Programme for the adoption of the acquis 2018–2021 -Third Revision, 2018 -Economic Reform Programme (ERP) for the Period 2019–2021 -Strategy for Support to the Development of Small and Medium sized Enterprises, Entrepreneurship and Competitiveness for the period of 2015–2020, accompanied by an Action Plan -National Employment Strategy for the period of 2011–2020. - Strategy for scientific and technological development 2016–2020

10	Patents	Innovative technologies related to the circular economy boost the EU's global competitiveness.	• Horizon 2020	Note: In Serbia, investments in research and innovation are still low, particularly in the corporate sector. The Innovation Fund is advancing Serbia's innovation financing and promoting better integration between the research and private sectors. The Innovation Fund has been established in 2011 as an independent governance structure, with a robust international peer review system. The Innovation Fund aims to promote links between research and technology development and economy and encourage and support the development of innovative technology. The intention of the Innovation Fund is to contribute to the overall development of innovation through various financial aid instruments, particularly by fostering the establishment of new and strengthening the existing companies. Recently, The Fund for Science was established/ reestablished.
*Indicators are under development				

Another relevant document worth noting is the *Energy Sector Development Strategy of the Republic of Serbia to 2025 with projections to 2030*[59] (2016); it identifies three priorities for the development of the energy sector: provision of energy security, energy market development, and overall transition towards a sustainable energy sector. The third includes improvements in energy efficiency, increased use of renewable energy sources and promotion of environmental protection in all fields of energy activities, which is in direct correlation with resource efficiency. The Strategy is being implemented through the Implementation Program.

Considering the recommendations of the European Commission on the Circular Economy, *amendments to the Waste Management Act*[60] were adopted in January 2016, enabling support of the circular economy concept and creation of green jobs. The changes made to the Law on Waste Management introduced the terms "by-product" and "end-of-waste status." The law regulates the procedures and conditions under which a substance gains the status of a by-product, as well as the conditions and procedures by which the waste can be given end-of-waste status and can be used as a raw material. The first step towards a circular economy in the new legislative framework is the application of the waste management hierarchy, especially the prevention of waste creation.

It should be mentioned that two important strategies expired/almost expired: Sustainable Development Strategy of the Republic of Serbia for the period from 2008 to 2017, and National Environmental Approximation Strategy for the Republic of Serbia, 2011, prepared under the assumption that January 1, 2019 is the accession date. Also, laws are constantly being amended with bylaws *for the reason of approximation* with the newest EU sets of laws and regulations[61].

59 *http://www.mre.gov.rs/doc/efikasnost-izvori/23.06.02016%20energy%20sector%20development%20strategy%20of%20the%20republic%20of%20serbia.pdf (English),http://www.mre.gov.rs/doc/efikasnost-izvori/program%20for%20the%20implementation%20energy%20strategy%20for%20the%20period%20from%202017%20until%202023.pdf (English)*

60 *Website: https://www.paragraf.rs/propisi_download/zakon_o_upravljanju_otpadom.pdf (Serbian)*

61 *www.interreg-danube.eu/moveco*

6.b. Mapping activities and Initiatives

Serbia is implementing some initiatives that support the circular economy, already listed in "Serbian National Profile 2018" prepared by Serbian Environmental Agency for EEA 2018 edition of the More from Less report[62], as well as in the Study on Achievements and Perspectives towards a Green Economy and Sustainable Growth in Serbia[63]. Circular Economy Actions/Initiatives Across time[64] in Serbia as the outreach of this assessment[65] are given in the table below. The table should be considered as open-ended/open to additions, when and if identified.

Year	Name of Action/Initiative	Origin	Level	Type
since 2007.	The Cleaner Production Center of Serbia was founded in 2007, as part of the UNIDO/UNEP Global Network for Resource Efficient and Cleaner Production. So far, it has helped apply resource efficiency and cleaner production methodology in more than 100 companies in Serbia and trained a number of experts in cleaner production. The Center works on various projects on raw materials and energy efficiency. Its Chemical Leasing project introduces a new business model in the management of chemicals. Other projects include Resource Efficiency Projects in the Food Processing Industry, Implementation of cleaner production in 10 IPPC production facilities within the electric power industry of Serbia, Eco-profit projects in the towns of Pančevo and Čačak, Implementation of cleaner production in 20 Serbian companies from different sectors, Sustainable tourism for rural development in Serbia. Link: http://www.cpc-serbia.org/chemical-leasing.html (English)	The Cleaner Production Centre of Serbia	National, Local	Project, case study
2012.	National Report for the World Conference on Sustainable Development, Rio De Janeiro 2012 - Study on Achievements and Perspectives towards a Green Economy and Sustainable Growth in Serbia. Publication https://sustainabledevelopment.un.org/content/documents/984serbia.pdf	UNDP	National	Report
2013.	Green Economy Scoping Study on Serbia - the following sectors were identified for their role and importance to the national economy and became the focus of the analysis: • energy demand, with an emphasis on energy efficiency in buildings (including residential, commercial and service), industry and transport; • energy supply, with an emphasis on power generation, including the use of renewable energy; • agriculture, with a focus on the potential to move to organic agricultural practices, increasing value added and employment. Publication: http://www.unep.org/greeneconomy/Portals/88/Research%20Products/Serbia_GESS.pdf	UNEP	National	Scoping Study

62 Resource efficiency and circular economy in Europe – even more from less , to update data from 2016: http://www.sepa.gov.rs/download/publikacije/MoreFromLess_MaterialResourceEfficiencyEurope.pdf

63 http://www.undp.org/content/dam/serbia/Publications%20and%20reports/English/UNDP_SRB_Study_on_Achievements_and_Perspectives_towards_a_Green_Economy_and_Sustainable_Growth_in_Serbia.pdf

64 In the form presented in An Inclusive Circular Economy: Priorities for Developing Countries, research paper by Felix Preston, J.Lehne and L.Wellesley, Chatham House, May 2019

65 With contribution of: Jasminka Randjelovic - Safer Chemicals Alternative (ALHem), Dragana Petrovic - Victoria consulting d.o.o, Sinisa Mitrovic, Dusan Stokic and Ivana Putnik – Serbian Chamber of Commerce

Year	Name of Action/Initiative	Origin	Level	Type
since 2012.	Environmental certification/labelling in the tourism sector - Blue Flag awards for beaches (and marinas) in Serbia[66] ; Green Key awards for excellence in the field of environmental responsibility and sustainable operation within the tourism industry, in Serbia. Link: http://feeserbia.com/	EASD[67]	National	Standards, Programs
2013-2019.	Project: **Eco-package (Eko-paket)** The main objective: raised awareness among students in Eco-schools and wider communities about correct methods of separation and disposal of used beverage cartons and the importance of recycling and renewability. Specific goals: Students educated about correct methods of separation and disposal of used beverage cartons. Wider communities encouraged to participate in the process of collection and recycling of UBC in order to raise their environmental awareness. Sustainable forest management introduced through FSC model, origin of used cartons and its production. Description of the project: •Eko-paket is a project implemented in Serbia since the 2013/2014 school year, exclusively run under the International Eco-Schools Program. The program shows a strong link with the educational Sustainable Development Goal (SDG 4) and the Goal on global partnership for sustainable development (SDG 17), as well as with other SDGs. •The concept of the project consists of three activities: creative art work competition, based on different theme every year, collection of used beverage cartons (UBC), and educational workshops for school children including demonstration how UBC can be turned into paper (these workshops are conducted by EASD since the 2015/2016 school year); During the creative art work competition, children and students of Eco-schools turn their used beverage cartons into works of art, giving to them another look and life. The project includes popularization and focus assurance of Eko-paket activities within the Eco-school's family and wider.	Tetra Pak and EASD	National	Project **Policy level:** advocating for sustainable waste management **Technical level:** Education and raising awareness of children and students how to deal with secondary raw material, especially with used cartons **Visibility level:** Through Eco-schools' network and creative art competition, posts on Eco schools' social networks and web sites, local media announcements.
2016.	"Circular economy as the chance for Serbia's development" https://api.pks.rs/storage/assets/CE%20Publikacija%20OEBS%202016(1).PDF	OSCE	National	Publication
2016-2018.	GIZ IMPACT Serbia[68] and the Serbian Chamber of Commerce initiated a project that aims to develop a strategic document on circular economy in the field of waste management[69] (through the Municipal Waste and Wastewater Management (IMPACT II) project) Study: Nonformal sector in waste management Study: Circular Economy Strategy in Waste sector Flayer: https://api.pks.rs/storage/assets/GIZ_IMPACT_FLAJER.pdf	GIZ	National	Project, Study

66 *EuropeETC/ULS report of Tourism and Environmental Protection, you'll find it at: http://uls.eionet.europa.eu/Reports/TOUR_index_html*

67 *National Operator for Serbia is Environmental Ambassadors for Sustainable Development (EASD)*

68 *https://www.giz.de/en/worldwide/21215.html*

69 *Outreach final text is not available until now.*

Year	Name of Action/Initiative	Origin	Level	Type
cont.	National Commission KS A 207 (mirror committee ISO/ TC207) with the scope of Standardization in the field of environmental management systems and tools in support of sustainable development. The Commission is responsible for the adoption of the ISO 14000 series of standards dealing with topics like: environmental management, environmental labeling, environmental performance evaluation, life cycle assessment (LCA), GHG management, life cycle costing (LCC), eco-design, green bonds, determination of environmental costs and benefits, eco-efficiency of products system, environmental communication, carbon footprint of products, adaptation to climate change, etc. A representative of Chamber of Commerce and Industry of Serbia (CCIS) is chairing the Commission. Link: https://www.iss.rs/rs/tc/?national_ committee_id=536. Standards are published by ISS	Institute for Standardization of Serbia (ISS)	National	standards
	National Commission KS A 268 (mirror committee ISO/ TC268 and ISO/TC 309) with the scope of Standardization in the field of sustainability, social responsibility, sustainable communities, smart cities, smart transportation, corporate governance, etc. A representative of Chamber of Commerce and Industry of Serbia (CCIS) is chairing the Commission. Link: https://www.iss.rs/en/tc/?national_ committee_id=793. Standards are published by ISS	Institute for Standardization of Serbia (ISS)	National	standards
n/a	Feplo, a Serbian company based in Čačak, manufactures waterproof building panels out of waste composite packaging material – Tetrapak. The panels have good insulation properties. For 2.5 m2 of panel surface it uses 20 kg of waste packaging.	Feplo		Business – practical cases
	Eco Recycling – Serbia. Based in Sirig, the company converts used tires into a variety of products through the production of rubber granulate.	Eco Recycling		
since 2017.	**The Center for Circular Economy,** formed as a department in the Serbian Chamber of Commerce. **Academy for Circular Economy (Climate-KIC project)** Link: http://akademija-ce.rs/ https://pks.rs/vesti/akademija-cirkularne-ekonomije-pocinje-4-oktobra-1423 https://pks.rs/vesti/odrzana-radionicu-cirkularne-ekonomije-i-upoznavanje-sa-akademijom-za-cirkularnu-ekonomiju-pks-1332	Serbian Chamber of Commerce	National	Trainings, Project
since 2017.	**Project: Every can counts in Eco-school** The main goal: raised awareness among students in Eco-schools and wider communities about methods of separation and disposal of cans, importance of recycling and renewability. Specific goals: Students educated about the need for separation and disposal of cans, in terms of sustainable use of resources. Wider communities encouraged to participate in the process of collection and recycling of cans in order to raise their environmental awareness.	EASD and RECAN Foundation	National	Project **Policy level:** advocating for sustainable waste management **Technical level:** education and raising awareness of children and students how to deal with secondary raw material, especially with cans and valuable secondary material **Visibility level:** Through Eco-schools network local media are engaged to support Eco-schools in this activity.

Year	Name of Action/Initiative	Origin	Level	Type
2017-2020.	**ENV.Net Factoring the Environmental Portfolio for WB and Turkey in The EU Policy Agenda** The main goal: Contributed to the improvement of environmental policy-making and implementation in compliance with the EU standards. To this end, the network foresees to contribute to both improved and intensified inter-action among actors (including environmental CSOs, media and policy-makers) and an overall more enabling technical and financial environment where these actors operate. A strong network of organisations built to serve as a specific force in advocacy and policy improvement giving a voice to citizens. Bridges built among key stakeholders used in accession countries to pay more media and decision maker's attention on key environmental issues toward EU integration. Specific goals: The action sets out to strengthen the profile of ENV.net as the leading network and bridging actor in environmental policy-influencing in the WB and Turkey region (vis-à-vis EU). Further, it foresees introducing and initiating a discussion on the **Circular Economy** concept in the region, as well as **intensifying climate change actions**. The action also foresees a number of value-adding, cross-cutting elements such as inter-partner learning/exchange, networking, and thematic organizational support to third parties (i.e., local grass-root organizations, media). In the frame of the project Financial Support to Third Parties for Monitoring, Evidence-Based Advocacy was launched in order to advance environmental sustainability action. **Two projects of local NGOs from Sombor and Cajetina relates to the circular economy**: The Hive-circular economy as a model of entrepreneurship for the youth, Education Development Center Planet; The circular economy model in the service of environmental protection in the municipality of Cajetina, Citizens association Zlatiborski krug Publication: **"Textile and Fashion in the Circular Economy Concept"**, http://ambassadors-env.com/wp-content/uploads/CA-Report.pdf	EASD as partner with 8 other organizations from EU, WB and Turkey	Regional, National	Project **Policy level:** advocating and policy improvement related to circular economy and climate change **Technical level:** Intensifying inter-action among NGOs, media and policy-makers **Visibility level:** Media involvement at all levels contributed to better understanding how citizens to participate in decision making process.
2018.	On October 12, 2018 in EU-info center in Belgrade, EASD (Environmental Ambassadors for Sustainable Development) jointly with National Convention on the European Union (NCEU), organized event "Circular Economy and Negotiation Chapter 27". Main points of Spotlight Report are presented. EASD/ENV.net Serbia **Initiative to update/rethink National Strategy for Sustainable Use of Natural Resources in the frame of circular** economy concept is presented and acknowledged. Initiative was be send to decision makers.	EASD, NCEU	National	Policy Initiative; Project; Spotlight report
since 2018.	**"Circular Economy Platform for Sustainable Development in Serbia".** The UNDP works to change the linear (take-make-waste) approach to production and consumption to a more circular one, in the following sectors: single-use plastics, textiles and furniture, as well as food waste. The initiative encompasses identifying and removing regulatory barriers that companies face in improving the circularity of their operations, promoting good practices and Circular Business models, as well as joint creation of circular economy roadmaps for Serbia. These strategic plans would define desired outcomes, and identify the major steps or milestones needed to reach it. The UNDP will also test innovative finance mechanisms, such as impact investment, to enable financing for transition towards the circular economy. In parallel, to promote eco-design and use it for education of new-generation designers, the Young Balkan Designers Open Call for Circular Design was launched. A series of learning sessions and creative workshops with schoolchildren is being organized, as well showcases of innovative solutions for reducing food waste and options for its use as a resource. https://www.rs.undp.org/content/serbia/sr/home/presscenter/articles/2019/circular-economy-for-sustainable-development-in-serbia.html Publication:http://www.undp.org.rs/FactSheets/Circular%20Economy.pdf	UNDP	National	Platform

Year	Name of Action/Initiative	Origin	Level	Type
2018-2019.	Publication of Third Communication on Engagement of the Chamber of Commerce and Industry of Serbia in accordance with 10 UN Global Compact principles for the period January 2018 – June 2019. Report contains XV chapters, such as Chapter II – Environment, Chapter III – Circular Economy, etc. Link: https://api.pks.rs/storage/assets/Izvestaj%20za%20globalni%20dogovor.pdf (Integral Serbian version) https://s3-us-west-2.amazonaws.com/ungc-production/attachments/cop_2019/479790/original/UN_global_compact_ENG.PDF?1571652864 (English summary) Third Communication on Engagement of the CCIS in accordance with 10 UN Global Compact principles for the period January 2018 – June 2019.	Chamber of Commerce and Industry of Serbia	Local	Biennial Report
2019.	**Mikser festival 2019** Link: https://mikser.rs/10-mikser-festival-2019-cirkulisi/ https://www.circularchange.com/events/2019/5/24/mikser-festival-2019-serbia Publication: https://static1.squarespace.com/static/5b97bfa236099baf64b1a627/t/5c6d4b77ec212d561029074e/1550666649767/Mikser+Festival+2019+-+Circulate.pdf	Mikser organisation	Local	Project
2019.	Green Public Procurement through stakeholder synergy Overall Goal is contributing to developing and fostering the green public procurement (GPP) in Serbia by building CSOs capacity to support public authorities to engage in GPP, as well as other stakeholders involved in this process in order to reduce adverse impact on health and the environment. Expected results: •Undertake advocacy work to competent authorities to adopt the National Action Plan (NAP) for GPP •Creation of network of CSOs willing to advocate for GPP •Increase awareness and knowledge about the benefits of GPP among procurers and bidders •Development and promotion of GPP Guidance based on EU GPP criteria/technical standards/specifications for four types of products (paper, IT equipment, cleaning service and furniture). •Development of Brochure of good examples of GPP implementation in practice •Development of Guidance for Green Procurement for CSOs Link: http://alhem.rs/zelene-javne-nabavke/ Publication:http://alhem.rs/wp-content/uploads/2013/12/Izvestaj-ZJN-u-RS-novo.pdf http://alhem.rs/wp-content/uploads/2013/12/Izvestaj-CSO-mapiranje-NOVO-2.pdf http://alhem.rs/wp-content/uploads/2013/12/Smernice-za-zelene-nabavke-nov.pdf http://alhem.rs/wp-content/uploads/2013/12/Vodi%C4%8D-kroz-kriterijume-za-zelene-javne-nabavke.pdf http://alhem.rs/wp-content/uploads/2013/12/ZJN-Primeri-dobre-prakse-iz-EU-2.pdf	Safer Chemicals Alternative (ALHem)	national	Project **Policy level:** advocating for NAP for GPP **Technical level:** Development of Green Criteria and Technical Specifications for 4 product groups **Visibility level:** Promotion of GPP
2019.	**Fashion Sustainability Day @ Belgrade Fashion Week** - An event made to highlight those issues but also to make strategic solutions and proposals for innovation in the fashion industry in order to make it more sustainable and Eco-friendly. http://stillinbelgrade.com/2nd-edition-of-fashion-sustainability-day-perwoll-fashion-week/	Center for sustainable development of Serbia (CORS); F.fm podcast	National	Showcase

Year	Name of Action/Initiative	Origin	Level	Type
2019.	**Road map for accelerating the transition towards the circular economy in the Danube region** Publication: https://www.rs.undp.org/content/serbia/sr/home/presscenter/articles/2019/circular-economy-for-sustainable-development-in-serbia.html http://www.interreg-danube.eu/uploads/media/approved_project_public/0001/35/096760568197ac127f49a0b344c9ffb66f07668e.pdf	Danube Transnational Program; Moveco	Multicounty	Project
since 2019.	**National mirror committee for Circular Economy** (ref. ISO committee: TC 323). The national technical commitee (KS Z 183) with the scope: Circular economy and waste management. Link: www.iss.rs, https://www.iso.org/committee/7203984.html	Institute for standardization of Serbia	national	standards
2019-2020.	**Shadow report to Agenda 2030 Voluntary National Report** Link: https://ambassadors-env.com/en/2019/12/08/shadow-report-on-the-vnr-of-the-agenda-2030-implementation-in-serbia-is-finalized/	EASD	National, International	Project, Shadow report
2019.	**Ex-Ante impact assessment for Circular Economy policy** (under the PLAC III project). Preparation of an ex-ante impact assessment[70] that will be used as a starter document in the public policy document determination process in order to achieve the goals and requirements set out in the European Commission's Circular Economy Action Plan, which includes measures that help and stimulate the transition towards the circular economy. Assistance to the Ministry of Environmental Protection Link: http://euinfo.rs/plac3/ Publication: http://euinfo.rs/plac3/vesti/kako-do-cirkularne-ekonomije-u-srbiji/	Consulting company DMI Associates	national	Project/ Policy

7. Conclusion and possible way forward

The circular economy concept in Serbia is still in its early stage — Serbia plans to refer to the circular economy principles in the updated waste strategy (ongoing). By addressing the circular economy only with waste management issues shows that the circular economy concept is still in its early stage. Ensuring a successful transition to the circular economy, however, requires efforts on many different fronts.

To underline:

- **circular economy goes beyond waste management**
- **circular economy goes beyond SDG12**
- **circular economy goes beyond environmental sector.**

It should be noted that circular economy issues in the accession process are not only subject of Chapter 27 on Environment and Climate Change; ***the circular economy is relevant to all sectors of the economy***.

No integrated approach is in place. Serbia should strengthen its legal and policy frameworks for the circular economy, including remaining EU directives' transposition and implementation, as well as approaches to addressing resource efficiency along product life cycles (like through

70 An ex-ante impact assessment is a process implemented from the earliest phase of planning and designing a public policy, and/or drafting and adopting a public policy document and regulation in accordance with the law regulating the planning system of the Republic of Serbia. It consists of a number of steps aimed at the adoption of an optimum public policy, i.e. the adoption of an efficient regulation through an analysis of the current situation, identification of the desired change, its elements and its causal relationships, eliminating the causes of existing problems in specific areas of planning and implementation of public policy, and achieving goals established by public policy documents and regulations.

extended producer responsibility schemes, green public procurement, and partnerships between businesses working along the value chain in which one company's waste becomes another's' material input). Given that resource efficiency, circular economy and raw materials supply are multidisciplinary areas, responsibilities are shared between ministries; there is a need for better co-operation between them, as well as improving the systemic approach.

Environmental policy framework needs to be reinforced in key economic and sectoral policies (like proper implementation of SEA, EIA, IPCC/Industrial Directives, investment tools).

Possible strategy for the way forward could benefit from this study.

Exercising legally prescribed procedures, some ***possible ways forward*** are:

- Prepare the appropriate public policy paper for the circular economy[71] that will provide guidelines for action
- Use circular economy as a cornerstone of industrial strategy
- Consider Initiatives to update and rethink the National Strategy for Sustainable Use of Natural Resources, possibly in the form of the National Sustainable Use of Natural Resources Plan;
- Update the waste strategy, possibly in the form of the National Waste Management Plan
- Initiative to update and rethink Agenda 2030 (now in the form of the Voluntary National Report on Agenda 2030, with the existing Shadow Report), possibly in the form of the Plan for Agenda 2030 implementation
- Consider new appropriate legislation
- Build/strengthen and monitor effectiveness of multi-stakeholder coalition to foster the circular economy process
- Accelerate the dissemination of knowledge and awareness-raising about circular economy topics.

Given that resource efficiency, circular economy and raw materials supply are multidisciplinary areas, responsibilities are shared between ministries; there is a need for better co-operation between them, as well as improving the systemic approach.

Sustainability in risk management needs to be mainstreamed and long-term thinking fostered (environmental and climate risks are not always adequately considered by the financial sector; and social factors can also have concrete consequences for financial institutions including legal risks, etc.)

It is necessary to accelerate the awareness raising and dissemination of knowledge around circular economy topics.

The process of the circular transition is a ***systemic process*** (rather than a one-off, finite document), where ***continuity in the implementation*** of agreed policy is crucial (especially for countries with economies in transition).

71 In line with Regulatory impact assessment (RIA) and under the Law on the Planning System of the Republic of Serbia ("Official Gazette of RS", No 30/18), an ex-ante impact assessment must be done before determining the type of public policy document. In February 2019 the Regulation on the methodology of public policy management, impact assessment of public policies and regulations, and the content of individual public policy documents, was adopted by the Serbian government.

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