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## **REPUBLIC OF SERBIA PET DEPOSIT RECYCLING SYSTEM – A MUST-WIN BATTLE!**

**Summary:** The following study analyzes the legal framework of the environmental conditions concerning the superintendence of Polyethylene terephthalate (commonly abbreviated PET) packaging in the European Union (EU) with an emphasis on the Republic of Serbia. The Republic of Serbia is in the process of joining the EU; therefore, it has to evaluate and even more so implement adequate legal norms concerning PET packaging in order to meet EU waste management targets. Serbia's future policy has severe obstacles ahead of resolving these issues. Numerous unlicensed landfills, the unregulated management of waste sale with an inadequate number of licensed recyclers managed by the Serbian Environmental Protection Agency, are the key topics discussed in this study. PET packaging, which roughly represents 10% of total waste, moreover 30% of total waste by volume overlooking a thousand-year-long decay period, holds a fundamental issue in the following study. Examining the singularities of PET packaging with a focus on country legal framework together with the available data of the Serbian Environmental Protection Agency plus the confinements of the EU membership the study prescribes a solution of the current state within the Republic of Serbia with the preamble of a deposit system recycling in PET circuit packaging.

**Key words:** environment, PET packaging, packaging waste, recyclers, deposit system

### **Introduction**

The right to a robust ecosystem and a healthy environment is with no doubt a necessary exclusive right to each individual moreover a comprehensive civilizational achievement that we all should have a propensity toward - "*To defend and improve the human environment for present and future generations has become an imperative goal for mankind-a goal to be pursued together with, and in harmony with, the established and fundamental goals of peace and of worldwide economic and social development.*"<sup>1</sup> However, the erudition through official environmental institutions, non-governmental organizations, and citizen's associations indicate the opposite. It

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<sup>1</sup> Stockholm Declaration, 1972, UN doc. A/ CONF.48 / 14 Article 1

seems that individuals have brought the planet to the very limits of existence through the irresponsible treatment of nature. The activities of persons in various spheres of life undoubtedly call into question the very continuance of humanity.<sup>2</sup>The environment is increasingly polluted, and urgent measures are required to stop further atmosphere, soil, and water contamination. The growing population and companies that provide everything needed for life on earth are increasingly producing waste that significantly pollutes the surroundings. Developed nations have long-drawn regulated waste management methods to mitigate the accumulation of introduced pollutants. *"For the means of environmental regulating protection, the seventies of the past century have stewarded substantial progress. Throughout that period, the need for environmental protection was emphasized, primarily due to the awareness of a critical component of human life and health "*.<sup>3</sup>In literature, the Stockholm Declaration's adoption in 1972, which defines the basic principles of international environmental law for the first time at a global level, is most commonly cited as a turning point in this field. Following the Stockholm Declaration, environmental preservation and the temperance of environmental pollution have been addressed through various legal instruments within the internal legal frameworks of nations and internationally.<sup>4</sup>The Republic of Serbia sadly, for the well-known reasons (long-standing war in the environment, sanctions, bombardment, transition), could not reach or resolve a clear path in the present where we can say that the waste management in our country is satisfactory or at least reliable. Data from the Environmental Protection Agency show that we currently have 164 officially registered municipal landfills in Serbia, of which 70% do not have the required permits or adequate environmental assessments. In addition to that number, a list of 2,710 illegal landfills are in proximity to principalities, towns, and villages.<sup>5</sup>Unofficial statistics are even more worrisome, with the total number of 20,000 illegal and unregistered waste landfills in Serbia. Plastic PET packaging is deliberately capturing an increasing percentage of total waste, both worldwide and nationwide. The significance of the global pollution plastic PET packaging problem evidences a formation of five large floating islands of waste, which is principally plastic packaging. It covers an area of 1.6 million square kilometers, representing an area of three France.<sup>6</sup> According to estimates annually, between 1.14 and 2.4 million tonnes of plastic, enter oceans solely from the rivers

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<sup>2</sup> Bjelajac Ž., Počuča M., Mijatović Dukić M., (2013) "Uranium and dioxin consequences of bombing of Yugoslavia in 1999 and its impact on the ecosystem and human health", Journal of Environmental Protection and Ecology, vol.14. no.2., p.482

<sup>3</sup> Milan Počuča, (2018) Basic Postulates of the Aarhus Convention with Special Reference to the Importance of this Treaty in the Legal System of the Republic of Serbia, in Milan Počuča et.al. Novi Sad, University of Economics Academy, Faculty of Economics and Justice in Novi Sad, Transposition of the requirements of the Aarhus Convention into the legal system of the Republic of Serbia with special reference to the competences of local self-government units in the territory of AP Vojvodina, p.8.

<sup>4</sup> Popov D., (2013) "Principles of Environmental Protection in the Documents of the United Nations, the European Union and the Law on Environmental Protection of the Republic of Serbia", Proceedings of the Faculty of Law in Novi Sad, No.2 p.132.

<sup>5</sup> According to available data, 20% of total waste ends up in illegal landfills and landfills. Source Environmental Protection Agency [www.sepa.gov.rs](http://www.sepa.gov.rs) accessed on 02/20/2020.

<sup>6</sup> Laurent C.M.Lebreton, et.al., "Evidence that the Great Pacific Garbage Patch is rapidly accumulating plastic," Scientific Reports 8, no.4666 (March 2018) <https://doi.org/10.1038/s41598-018-22939w>

streams. Further, more than half of the plastic that rivers carry is lighter than water and will never sink when ascertained in oceans.<sup>7</sup>

According to Eurostat data from 2014, the amount of plastic PET packaging waste produced in the EU was 2,503 million tonnes, which is the most massive recorded quantity since 2004. In 2015, 166.3 kilograms of packaging waste per EU citizen was produced.<sup>8</sup> Of course, the production of waste in most developed countries is judicious, considering the most substantial standard of living with the population's financial capabilities. "*The negative impact that was increasing the amount of waste has on the environment implies a permanent loss of material and non-energy resources, pollution of all elements of the environment, air and water, and land.*"<sup>9</sup>

The situation is not better in the Republic of Serbia. We can say with certainty that it is worse, as Serbia does not even meet the number of necessary landfills. However, waste management is standardized, but in practice, the implementation mechanisms are modest and inadequate, in the 2012 Republic of Serbia abolished the environmental protection fund! The environmental taxes collected annually on various purposes only partially utilized to improve the environmental sector<sup>10</sup>. Plastic and other waste are disposed of at certified but also on environmentally hazardous landfills, as well as at numerous illegal landfills, accompanying so-called "temporary" landfills primarily found near populated areas in proximity to drinking water streams of the communities. Excessive use of plastic PET packaging, which is significantly cheaper than glass packaging, is directly correlated with increased and unmanageable waste disposal. Plastic (PET) packaging is becoming a problem for all jurisdictions; from the Republic of Serbia Environmental Protection Agency, the local self-government units must be urgently addressed. Principally, with an adequately established financial structure, serious incentive measures, and consistent legal solutions will suitably accompany existing normative solutions from developed European and European countries. A clear penal policy and its practical implementation are also of great importance in managing the situation in landfilled waste management.

## Existing normative framework of the EU and Serbia

At the global level, the issue of packaging waste management is not an issue that is isolated from up-to-date, most urgent global issues addressed by all countries

<sup>7</sup> Laurent C.M. Lebreton, et al., "River plastic emissions to the world oceans" *Nature communications* 8, no. 15611 (June 2017) <http://doi.org/10.1038/ncomms15611>

<sup>8</sup> Eurostat, *Statistics Explained*,

[https://ec.europa.eu/eurostat/statics-explained/index.php/Packaging\\_waste\\_statistics](https://ec.europa.eu/eurostat/statics-explained/index.php/Packaging_waste_statistics). 20.02.2020.

<sup>9</sup> Mladenov M., Avramović (2018) "Harmonizacija propisa Republike Srbije sa pravom Evropske unije u oblasti upravljanja otpadom", *Zbornik radova XV tradicionalnog skupa „Pravnički dani prof. Dr Slavoljub Carić“ Pravni fakultet Univerziteta Privredna akademija, Novi Sad* Pg. 152.

<sup>10</sup> Last year, more than 10.7 billion dinars were collected from eco-taxes, from what we find out from public finances only three to four billion dinars are spent for environmental protection. Source: [www.recycling.biz](http://www.recycling.biz) Newsletter # 139

or climate change. Accordingly, at the global level, the issue of environmental protection is regulated through treaties relating to the protection of the ozone layer and agreements regulating climate change issues." In the corpus of these sources, international agreements are the most significant. Today, it is believed that about 1,930 international treaties are governing the subject area. <sup>11</sup>The most significant without a doubt was the UN Framework Convention on Climate Change held in New York in 1992, followed by the same year second United Nations Conference on the Protection of the Environment so-called Rio Declaration on the Environment and Development. <sup>12</sup>One of the Rio Declaration's main goals was to highlight the consequences of degradation and the importance of establishing the concept of sustainable development. The fundamental premise of the sustainable development notion is based on the idea of development that meets the needs of today and future generations. <sup>13</sup>It is essential to remark the Basel convention of transboundary waste introduced in 1989 and was implemented in 1992. Unlike the previous two conventions, the Basel Convention has directly related to the substance of hazardous waste. However, the provisions directly apply to global packaging waste management. In this respect, it is the most important international document at the global level that deals explicitly with waste management. By acquiring candidate status for European Union accession, Serbia has taken on several commitments, notably through the closing of 35 chapters, which are a prerequisite for EU accession. Chapter 27 on environmental protection is the most challenging chapter looking from a financial perspective. It is estimated that the Republic of Serbia will have to fund between 13 and 15 billion euros in the closure of this chapter. Erudition, as mentioned above, applies to all expected requirements and directives to the EU standards that have been adopted and adhered by all present EU Member States. Regarding the regulation of the waste PET packaging, the European Union places this matter as a priority moreover places as the central issue within the protection and promotion of the environment and human life itself. Hither, we should also mention the Aarhus Convention, an international treaty ratified by the Republic of Serbia on July 31st, 2009, among about 50 countries. <sup>14</sup>

Currently, the most important regulations governing packaging waste management in the EU are Framework Directive 2008/98 / EC on waste <sup>15</sup>, Council Direc-

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<sup>11</sup>Environmental Information Portal, 02/19/2020, downloaded from [www.ecolex.org](http://www.ecolex.org)

<sup>12</sup> UN Framework Convention on Climate Change, 1992, Official Gazette of the FRY - International Treaties No.2 / 97.

<sup>13</sup> Počuča M., Martijašević- Obradović J., Drašković B., (2017) „Correlation between the air quality INDEX SAQI\_11 and sustainable rural development in the Republic of Serbia“, *Economics of Agriculture*, Belgrade, vol.64, no.3. p.1251.

<sup>14</sup> The Aarhus Convention, fully known as the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, was adopted in 1998 by the member states of the United Nations Economic Commission for Europe and countries that are not members of the European Commission UN for Europe. A condition was laid down that a signatory country must be a member of the United Nations, by which the Convention went beyond the regional framework and acquired the characteristics of a universal international document, especially after the accession of a number of Asian countries to the Convention.

<sup>15</sup> Directive 2008/98/EC of the European Parliament and of the Council (2008) on waste and repealing certain Directives, Official Journal of the European Communities, L312

tive 1999/31 / EC on landfills, Council Directive 1994/62 / EC on packaging and packaging waste, Directive 2004 / 12 / EEC supplementing Directive 1994/62 EC on packaging and packaging waste, Directive 2018/2 / EU supplementing Directive 1994/62 EC on packaging and packaging waste, Directive 2018/852 of the European Parliament and the Council amending Directive 1994/62 EC.

The Waste Framework Directive 2008/98 EC is the critical awning regulation in the EU that defines the issue of waste management, based on the European Union Waste Strategy. The Directive obliges the Member States to adopt and adopt measures to reduce and prevent the negative impact on the environment of waste produced; it also has an obligation to adopt plans to regulate the issue of waste management. This lead to the establishment of the "polluter pays" principle. Here principle suggests that the polluter bears the full costs of its actions, and the costs of generation, treatment, and disposal must be included in the product's price.<sup>16</sup> Respecting the requirements of the Directive, EU Member States have set up a functional system for the separate collection of waste for metal, paper, plastics, and glass.

The 1999 Landfill Directive defines the measures, provides guidance and guidance to prevent or reduce the adverse effects of landfills on the environment, surface and groundwater, soil, air, and human health. The Member States of the European Union shall adopt the laws, regulations, and administrative provisions necessary for its implementation not later than two years after the entry into force of this Directive. Five years have been left to meet the Directive's first objective, which is to reduce the amount of biodegradable waste to 70% of the total landfill. The provisions of this Directive are also vital because it establishes the obligation of EU Member States to close or modernize landfills in the future that do not meet the minimum technical and technological requirements for landfilling.

Importance of the Packaging and Packaging Waste Directives is the obligation of EU Member States to adopt and harmonize the measures governing the management of packaging and packaging waste in their national legislation. Regulations need to be placed to prevent the environmental impact of packaging and packaging waste from both Member States and other nations. In this respect, the issue of ecological principles of high environmental protection does raise the question of adherence. The Directive applies to all packaging contained within the EU market as well as packaging waste, whether used or in the household, commercial sector, or industry. Subsequent Packaging and Packaging Waste Directives continued the continued and consistent intention of further building new and binding environmental standards.

The existing regulatory structure in the Republic of Serbia of the Waste Management Strategy tendered for the period 2010-2019 has expired; furthermore, by the date of the current Government's Administration corresponding (March 2020), there is no new policy. There are existing plans established by the Ministry of Environment. However, it is unknown if the Republic of Serbia government will adopt and whether there will be an established proposal. In addition to the policy, which is a strategic document, will list the most influential legal documents governing the

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<sup>16</sup> Milan Počuča Milica Milić, (2018) Analiza pravnih akata lokalne samouprave koji se odnose na princip „zagađivač plaća“ u Srbiji, u Pravni i ekonomski aspekti primene zagađivač plaća, ur. Isidora Ljumović, Slavica Stevanović, Beograd, Institut ekonomskih nauka, ISBN 978-86-89465-43-3, str.236.

issue of environmental protection and in particular the management of packaging and packaging waste; Law on Environmental Protection<sup>17</sup>, Law on Packaging and Packaging Waste Regulation<sup>18</sup> establishing the plan for the reduction of packaging waste for the period 2015-2019.<sup>19</sup>

The Law on Environmental Protection as the parasol law regulates the integral system of environmental protection, which ensures the realization of the human right to life and development in a healthy environment and a balanced relationship between economic development and the environment in the Republic of Serbia.

The Law on Packaging and Packaging Waste regulates environmental conditions such as packaging specifications in order to be approved for distribution for managing packaging and packaging waste, including other matters of packaging substance and waste packaging. Without further analyzing the law mentioned above, we will list only the article governing the deposit and bail system and which will be essential to us in the further part of our work in which we will deal with possible solutions in the future. *"The government may set up a one-stop deposit system when it is determined that it is necessary to achieve national targets."*<sup>20</sup>

Regulation on the establishment plan for reducing packaging waste for the period 2015-2019 ceased to apply a new Regulation on March 2020 is not yet in sight. We will recall only the essential elements of the regulation relating to PET packaging. For the period 2015 to 2019, general targets for the reuse and recycling of packaging waste and specific targets for the recycling of packaging waste have been introduced; Recycling for 2015 plan 31%, 2016 plan 36%, 2017 plan 42%, 2018 plan 48% and 2019 plan 55%. Specific targets for plastics were: 2015 plan 14%, 2016 plan 17%, 2017 plan 19%, 2018 plan 21%, 2019 plan 22.5%.<sup>21</sup>

## Present state

In addition to officially mapped and official landfills, we are obliged to discuss the erudition provided by the Republic of Serbia's Environmental Protection Agency in 2018, that recorded between 20,000 and 30,000 illegal landfills and temporary landfills where citizens dispose of waste outdoors without any control and knowledge of competent authorities. If we append to aforementioned the data that in the Republic of Serbia we use annually (average use 20 minutes) and discard (decay takes 1000 years) two billion plastic bags and about 345,000 tons of plastic packaging (data for 2016), including the largest number of PET packaging, we get a clear picture of the size and significance of the problem we are facing<sup>22</sup>. In addition to

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<sup>17</sup> „Sl. glasnik RS“, br.135/2004, 36/2009-dr.zakon,72/2009-dr.zakon,43/2011-odluka US,14/2016, 76/2018.

<sup>18</sup> „Sl.glasnik RS“,br.36/2009.

<sup>19</sup> „Sl.glasnik RS“,br.144/2014.

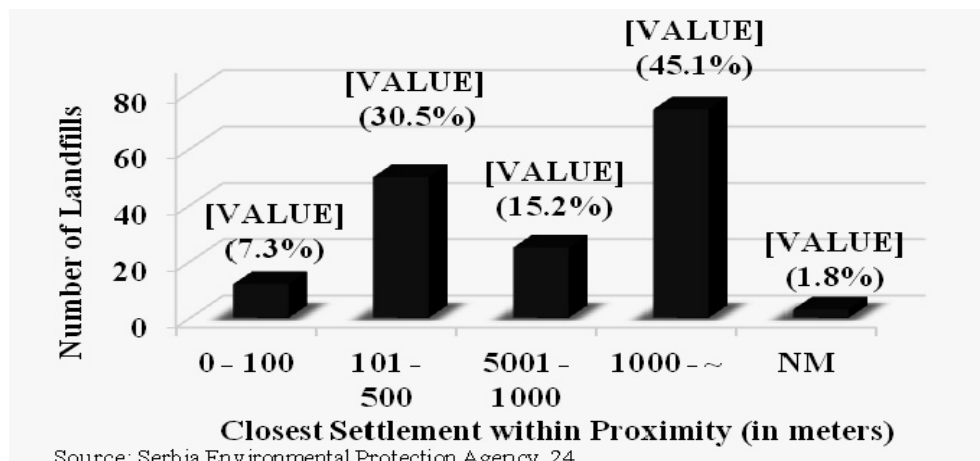
<sup>20</sup> Section 44 of the Law on Packaging and Packaging Waste

<sup>21</sup> Source: Uredba o utvrđivanju plana smanjenja ambalažnog otpada za period 2015-2019. godine, „Sl.glasnik RS“, br.144/2014.

<sup>22</sup> The world spends \$ 500 billion annually on the production of one trillion bags, with millions of plastic bags being produced every minute. According to a new Eurobarometer survey, 72 percent of

aesthetic pollution, plastics are hazardous to health when burned improperly, because the ash of the plastic is toxic. Clusters of plastic packaging (PET) in one place can be the cause of the flood because they can clog up the drainage and culverts. If not correctly processed through primary selection, but deferred to the landfill, during its decomposition plastic emits methane, which is much more dangerous than carbon dioxide in the context of creating a greenhouse effect. <sup>23</sup>An environmental problem with PET packaging is the emergence of microplastics, which through the food chain and air return and poison the people.

Having in mind that plastic packaging is not deposited at home but is disposed of with accordance given by the state and the local community legislation, the analysis of the current situation in Serbia will start to data on landfills and their vicinity of settlements and water sources, which is in direct correlation with the quality of the environment especially air and water in the immediate environment in which we live. Please see the distance of landfills from populated areas in the following chart<sup>24</sup>:



Source: Serbia Environmental Protection Agency. 24

Of the total number of landfills, 12 landfills (7.3%) are at proximate of fewer than 100 meters from the settlement. This knowledge sufficiently articulates the population's risk of contamination emitted from the landfill by air, especially given the risk of inhalation of microplastics that are crushed, peeled, pulverized, and converted into the particulate matter by the sun, rodents, weather, and creating a highly hazardous environment for humans health. The presence of smoke is registered in 101 landfills as waste materials are temporarily or permanently flared, resulting in gases from the decomposition of hazardous materials that emitted into the air, threatening the environment over an extensive area. The strong presence of rodents talks

Europe's citizens say they have reduced their use of plastic bags, and 38 percent have this habit adopted during the last year. Source accessed on 02/21/2020 :

[https://www.b92.net/biz/vesti/srbija.php?yyyy=2018&mm=02&dd=23&nav\\_id=1360410](https://www.b92.net/biz/vesti/srbija.php?yyyy=2018&mm=02&dd=23&nav_id=1360410)

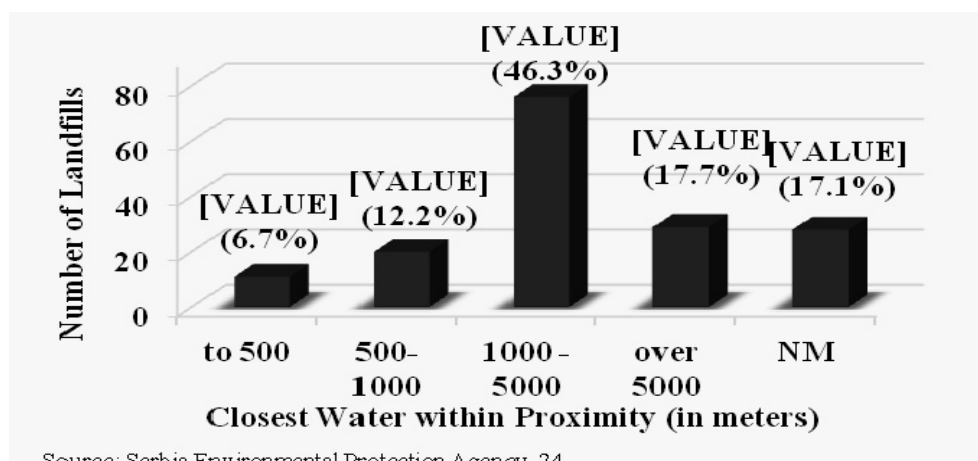
<sup>23</sup>Saša Petrović 29.05.2018, Problem plastične ambalaže u Srbiji od zagađenja do mogućnosti - <https://www.masina.rs/?p=6778>

<sup>24</sup> Waste landfills as environmental pollutants, accessed on 20/02/2020.

<http://www.sepa.gov.rs/index.php?menu=9&id=6003&akcija=showAll>

about the possible emergence of diseases carried by mice, rats, and other animals that live in the landfills.

It is particularly essential to remark and present data on the proximity of landfills to river streams wherefrom the population provides drinking water or for agricultural production. The processed data on distances between landfills from water surfaces show a devastating picture; 25 landfills (15.2%) located at distances less than 50 meters from shore, river, stream, lake, or reservoir. From this number, 14 landfills are practically located by the river shore or even on its essence. It is important to note that 20% of local government authorities did not present adequate data; therefore, we can assume that the situation is probably worse than the facts presented. Please see the distance of landfill from the water streams:



According to the Serbia Environmental Agency's reports, about 30% of packaging waste recycles in Serbia at this time. When it comes to plastics, the percentage is significantly smaller. The recycling of plastics is at the level of about 20% of the total recycled amount allocated. Expressed in pieces that arise every year in landfills, dumpsites, and temporary landfills remain more than 750 million pieces (50 000 tonnes) PET containers without plastic bags and other plastic materials are the most disposable. If we only add to this for the last ten years, noting that the recycling of packaging waste, especially plastic, in 2009 did not exist practically, then we can understand the magnitude of the problem I am analyzing and the amount of plastic we have immersed. At the same time, environmentalists and economists warn of a significant financial loss in the Republic of Serbia due to inadequate coverage when collecting plastic packaging waste, as the said amount is worth € 10 million on the recycling market.

### Proposed solutions

The normative solution found in the existing Law on Packaging and Packaging Waste allows us to resolve this issue through the deposit and bail system.



Namely, Article 44 of the Law empowers the Republic of Serbia Government to establish the systems as mentioned earlier for managing packaging and packaging waste, including plastics, provided that the Government must determine that this is necessary to achieve national goals. It is believed that the information presented shows that one of the solutions in the management of packaging waste is the introduction of a deposit and bail system. Establishing a deposit and bail system would very quickly begin to reduce the amount of plastic waste we consume. As envisioned for the deposit system, the end supplier who places the product packed in disposable packaging (PET bottles, for example) charges the end-user a deposit per unit of sold packaging to establish a return system for used disposable packaging. The manufacturer or importer of the product, which is packed in returnable packaging, establishes a bail system. The end supplier placing on the market a product packed in returnable packaging is obliged to pay a security deposit to the end-user for this type of packaging. The end supplier is obliged to accept the disposable one from the end-user in returnable packaging, furthermore upon return of the packaging; the final supplier is obliged to return the paid deposit or bail to the end-user.

The following proposal was developed with a team of researchers in 2019 from a study, "Investigation of potential deposit systems for beverage packaging that can be implemented in Serbia," created as a result of the joint project with the Ministry of Environment of the Republic of Serbia. The preamble of a deposit and bail system for packages and packaging waste management contributes significantly to the modernization of the waste management system in the Republic of Serbia. The introduction to deposit and bail system for packages would stimulate citizens and business entities not to dispose of disposable and reusable packaging, especially plastic packaging in a manner that endangers the environment. Results from some European countries indicate that over 90% of glass, PET bottles, and cans were collected through the deposit system. In support of the introduction, the views of the Society of Recyclers of Serbia address, "Deposit systems are a proven method of waste collection that guarantees high rates of material recycling and are therefore recommended in the strategic documents of many international organizations. The depositary system is also recommended by EU legislation as a vital instrument for enabling the reuse of packaging and reducing waste (Adopted Packaging Waste Packaging Directive and recently adopted Disposable Plastic Directive)."<sup>25</sup>

Moreover, the United Nations has also supported the deposit model on June 12th, 2017, and ratified the Resolution on Marine Waste and Plastic. The resolution calls for measures to "prevent and significantly reduce marine pollution." At the same time, the document proposes the introduction of "deposit systems for drinking packaging to reduce the amount of plastic waste that harms marine biodiversity."<sup>26</sup>

<sup>25</sup> The European Parliament has adopted a new directive banning single-use plastic items such as plastic plates, straws, glasses. From 2021, disposable tableware, plastic disposable plates, plastic straws, plastic earplugs, plastic balloon stickers, degradable plastic and food boxes, and expanded polystyrene cups will be banned in the EU. Source: Mondo, (03/28/2019) <https://mondo.rs/Info/Svet/a1175679/Banned-plastics-for-user-user-of-2021.-year-in-EU.html>

<sup>26</sup> Serbian Recyclers Association, <https://reciklerisrbije.com/kupi-konzumiraj-i-vrati-u-radnju-depozitni-sistemi-za-jednokratnu-ambalažu-za-pice> accessed 12.02.2020.

Milan Počuča, Republic of Serbia pet deposit recyclingsystem - a must-win battle!

That fact is not shocking given that PET packaging can be easily collected and recycled efficiently. The new concept of circular economy and growing awareness of environmental pollution provide essential incentives for governments of all countries to apply proven waste management models. In Table bellow, we can see the countries and packaging waste management system already introduced.

<b>Country</b>	<b>Mandate Year / System Type</b>	<b>Collection Target</b>
Croatia	2016 / Centralized System	90% Achieved 2015
Denmark	2002 / Centralized System	90% Achieved 2014
Estonia	2005 / Centralized System	79% Achieved 2014
Finland	1996 / Centralized System	93% Achieved 2014
Germany	2003 / Centralized System	97% Achieved 2014
Iceland	1989 / Centralized System	90% Achieved 2013
Lithuania	2016 / Centralized System	92% Achieved 2017
Netherlands	2005 / Centralized System	95% Achieved 2014
Norway	1999 / Centralized System	86% Achieved 2015
Sweden	1984 / Centralized System	88% Achieved 2014

Source: "Disposable Beverage Packaging Systems - Global Overview" - *nonprofit Reloop*<sup>27</sup>

The benefits of introducing a deposit system in the Republic of Serbia would be multiple and, in the concise term, would contribute to reducing waste and increasing awareness among citizens who would return their money and protect the environment through returnable packaging and disposable packaging. The risk of air pollution due to the ignition of plastic at landfills would be reduced. Vast amounts of existing plastic packaging found in nature and the environment in which we live would quickly be collected moreover returned, given the financial incentive for each quantity of returnable and non-returnable packaging. This method guarantees a high rate of return on packaging (plastic especially) for maximum convenience to the consumer, bearing in mind that an infrastructure network for the return of packaging throughout the country would be created in a very short time.

Bearing in mind the status of Republic of Serbia as a prominent candidate for EU acceptance and the target deadline in 2025, it is essential to perceive the policy of environmental care and the implementation of the directives and rules of conduct in the field of packaging and packaging waste management is an integral part of Chapter 27, which we necessitate the admission to the European Nations. The Directive on reducing the environmental impact of certain plastic products<sup>28</sup> that sets a clear objective for Member States to collect at least 90% of all PET bottles by 2025. Therefore, it is a crucial time to introduce a deposit and bail system in the Republic of Serbia as a supporting model of environmental protection in the part of managing and recycling PET packaging.

<sup>27</sup> <https://balkangreenenergynews.com/rs/kupi-konzumiraj-vrati-u-radnju-depozitni-sistemi-za-jednokratnu-ambalazu-za-pice/>

<sup>28</sup> <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52018PC0340>

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## СРБИЈА VS ПЕТ АМБАЛАЖА - БИТКА КОЈУ МОРАМО ДОБИТИ

**Сажетак:** Аутор у раду анализира правни оквир, тренутно стање заштите животне средине у ЕУ и Србији у делу управљања амбалажом и амбалажним отпадом. Србија као земља која се налази у процесу придруживања ЕУ и који процес подразумева хармонизацију и имплементацију правних норми које се односе на материју управљања амбалажним отпадом има озбиљне проблеме у решењу тог питања. Велики број дивљих депонија, нерегулисано питање откупа амбалаже и амбалажног отпада, мали број рециклера са дозволом Агенције за заштиту животне средине и лош обухват преузетог амбалажног отпада, питања су којима се аутор бави. ПЕТ амбалажа која на депонијама представља 10-ак % укупног отпада уз 30% запремине отпада са хиљаду годишњим периодом распадања, централна је тема у раду. Анализирајући феномен ПЕТ амбалаже, правни оквир, доступне податке Агенције за заштиту животне средине и преузете обавезе из система ЕУ, аутор се залаже и подржава предлоге за решење тренутног стања у Републици Србији кроз увођење депозитног система за једнократну ПЕТ амбалажу.

**Кључне речи:** животна средина, ПЕТ амбалажа, амбалажни отпад, рециклери, депозитни систем