Is an efficient and economically sound bio-waste management system being developed in Latvia?

Riga 2022

Latvijas Republikas
Valsts kontrole

Audit report

Is an efficient and economically sound bio-waste management system being developed in Latvia?

18 May 2022

Performance audit “Waste sorting and the immediate challenges in sorting biodegradable waste”

The audit was performed based on audit schedule No 2.4.1-3/2021 of 8 February 2021 of the Fifth Audit Department of the State Audit Office.

The cover design includes a photo from website *www.depositphotos.com*

Dear Reader,

We consider the leaves of trees, the cores of apples and potato peels as something without worth and expendable, but we can also see them as resources, for example, from which one can produce fertilizer or even heat. These diametrically opposed points of view, waste as a problem or waste as a resource, are also likely to determine the choice of how to deal with biodegradable waste.

During this audit, we comprehensively assessed the progress and initial results concerning the introduction of a biodegradable waste collection, recycling and reuse system in Latvia.

To obtain the greatest possible economic benefits from biodegradable waste and to promote environmental protection, one must rely on the awareness and motivation of the generators of this waste, including the population to sort this waste from the mass of unsorted waste. To follow, the most suitable waste collection and recycling facilities need to be established for the local and regional governments, which differ both in terms of territory and population density. Finally, opportunities need to be provided for using the material generated as a result of waste recycling.

Although work on the introduction of the system in Latvia is still ongoing, it is already quite clear that we are moving on the well-worn path of untimely decisions, untapped opportunities, and ill-considered solutions. Why is it so?

At present, Latvia has only established the middle stage of the system, that is, collection and recycling. In addition, the chosen solutions are expensive and are applied similarly in areas with a high population density and in areas with a significantly smaller population. In turn, the introduction of the initial and final stages of the system currently leaves much to be desired. In other words, we are on the way to being prepared to recycle biodegradable waste at a high cost, but we have no biodegradable waste and no place to use the valuable material that can potentially be obtained from recycling.

Without an effective bio-waste management system and without taking advantage of the opportunities offered by the system to generate revenue from this waste, we run the risk of placing another costly burden on the population to maintain this system. Moreover, the ‘clock is also ticking’ in terms of our responsibility as a Member State of the European Union to ensure that biodegradable waste is sorted or recycled at source by 2023, leading to the ultimate goal of landfilling no more than 10% of the total household waste by 2035.

It is possible that several deficiencies described in this report will be difficult to address and, in some cases, “the ship has sailed”. However, we expect that both policy makers and implementers will be able to take a new look at the future of biodegradable waste management and, with fresh determination move from problem solving to utilizing opportunities.

Thank you to the specialists of the Ministry of Environmental Protection and Regional Development for their constructive cooperation during the audit and in determining the work to be

performed in the future! Thank you to the municipal specialists, waste managers and municipal landfill managers for their constructive cooperation in providing the information necessary for the audit!

Special thanks to Dr.sc.ing. Elīna Dāce, the leading researcher in environmental engineering and industrial biotechnology at the University of Latvia, who made a significant contribution with her knowledge and experience to the audit work!

Respectfully
Mr Edgars Korčagins
Department Director

Summary

Motivation

Between 2010 and 2018, the total amount of waste increased by 5% (114 million tonnes) in the European Union (EU)[i]. The United Nations (hereinafter - the UN), EU institutions and other international organizations have set ambitious goals for waste management systems that are included in the circular economy, and these goals are also binding on the Republic of Latvia.

A Directive of the European Parliament and of the Council[ii] (hereinafter - the Directive) stipulates that the share of municipal waste disposed of in landfills must be reduced to 10% of the total amount of municipal waste by 2035. About half of municipal waste is bio-waste[iii].

Therefore, a viable, efficient, and environmentally sound system for the **separate collection and recycling of bio-waste** is essential to achieve this goal. In addition, the Directive stipulates that the separate bio-waste collection system must be in place by the end of 2023[iv].

The introduction of a separate bio-waste collection system is developing very slowly in Latvia, and the completion of the necessary infrastructure for the bio-waste recycling process is planned only at the end of 2023. Significant risks have been identified which make it possible to predict possible that an effective bio-waste management system will not be established throughout the country by the end of 2023 and that the objectives set out in the Directive[v] will not be achieved.

In case the separate bio-waste collection system is not introduced **by the end of 2023, the Republic of Latvia may be subject to EU sanctions**.

The audit assessed whether an efficient and economically sound bio-waste management system is being developed and whether its implementation will take place within the set deadline.

Main conclusions

Latvia is not developing a bio-waste management system that is appropriate to the country's situation and which is proportionate, efficient and economically justified. The implementation of the system has been delayed significantly due to its chaotic implementation, lack of coordinated management and cooperation with all stakeholders. In order to implement and develop the system, a review of the current approach is necessary to find the most suitable solutions by using the existing

resources such as financial resources and existing infrastructure more efficiently. If the bio-waste management system is not "re-started", it will be implemented formally, as the population will not be motivated and will not sort biodegradable waste to the extent necessary for the planned capacity of the installed infrastructure, the population will overpay for bio-waste management, and the EU environmental goals will not be achieved which, in turn, will cause losses to the Republic of Latvia in the form of potentially applicable sanctions.

Since 2008, the European Commission (EC) has been **recommending** EU Member States to introduce a system of separate bio-waste collection, which, in turn, will ensure the efficiency of the recycling of the waste. The Directive[vi] currently **obliges** Member States to implement it by 2023. Establishing a bio-waste management system is a challenge for many EU Member States. However, experience shows that countries that started implementing the system earlier have now made more progress. For example, Slovenia, which is currently at the forefront of implementing a bio-waste management system among other Member States, has defined separate collection of bio-waste as a mandatory requirement since 1 July 2011[vii].

In Latvia significant steps were taken only in 2018 when it was stipulated that separate bio-waste collection systems should be introduced by local and regional governments starting from 2020[viii] but this has still not been done. Already in 2018, the EC prepared an Early Warning Report for Latvia[ix] on the implementation of EU waste management legislation. The report was drafted because Latvia was at risk of failing to meet its 2020 targets for preparing municipal waste for recycling. The **recommendations provided** in the report for the improvement of the waste management system, including for bio-waste, are **still not fully implemented**.

If a bio-waste management system is not implemented by 2023, the EC may impose fines for non-compliance with the Directive[x]. **The minimum amount** of a lump sum penalty payment **for Latvia is 392,000 euros**. Yet, it should be noted that, depending on the gravity and duration of the infringement, the fines may be significantly higher and **the maximum amount of sanctions is 11,566,120 euros per year** until the infringement is remedied[xi].

However, we are already feeling adverse financial consequences. The results of estimates made by the State Audit Office show that, without the introduction of the separate bio-waste collection and recycling system in the entire territory of the country in the period from 2021 to 2023, the

population of Latvia **will not gain potential savings of at least 16,576,830 euros,** including 6,430,910 euros[xii] in the Greater Riga waste management region and 10,145,920 euros in other waste management regions. Given the planned increase in the natural resources tax on waste disposal in 2022 and 2023, the unearned savings for the population might be higher than estimated.

This situation did not happen overnight and has many reasons. Firstly, the overall **coordination of public policy is not effective**, the action of the policy-maker, that is, the Ministry of Environmental Protection and Regional Development (MEPRD), is limited to the incomplete development of binding legislation and only partial monitoring of the situation, largely leaving the development of the separate bio-waste collection system to each local and regional government.

In addition, the situation of local and regional governments as policy implementers is complicated by the fact that **no specific and clear goals and tasks have been set for the implementation of the system at the national level, there are no specific quantitative or qualitative indicators** to ensure not only formal implementation of the system in local and regional governments (e.g., by installing a specific number of specialized bio-waste bins) but also **to secure the economic and efficient operation of the system by creating a balance among environmental objectives, demand, supply and costs.**

The MEPRD, as a sector policy maker, has not facilitated **the development of a common understanding** in local and regional governments, for instance, by developing guidelines for local and regional governments to organize a separate bio-waste collection system. As a result, waste producers do not have a sufficient understanding of what bio-waste really is, why it needs to be collected separately, and what one can put into a bio-waste bin.

According to international experience, setting up a separate bio-waste collection system is impossible without the active involvement of the population. **Awareness-raising and information activities** for Latvia's population about **the importance of waste sorting are insufficient**, despite the initiatives implemented by public organizations and green lifestyle enthusiasts. Local and regional governments and their institutions have also been lazy to demonstrate the separate bio-waste collection by their example and have not organized and supported the initiatives of the population. Until now, apartment building managers, who are the closest link in the bio-waste management system to the population, have not been sufficiently motivated and involved in informing the population about waste sorting.

The process of implementing a separate bio-waste collection and recycling system **has not been planned and coordinated** with all parties involved. Although the National Waste Management Plan for 2014-2020[xiii] envisaged actions to implement the separate bio-waste collection and recycling system, most waste management regions **did not develop plans** at the regional level **that would sequentially cascade the targets set in the national plan down to the regional level**.

The **objectives** set in the national development planning documents, **which were not met** in the previous programming period, **were transferred** to the new programming period without an evaluation. Moreover, this was done without determining performance indicators and without providing local and regional governments with greater clarity on the implementation process of the bio-waste management system.

The introduction of a separate bio-waste collection system requires significant financial investment. Thanks to the support of EU structural funds, such financial means were available to Latvia: **from 2018 to 2021, projects for the construction of bio-waste recycling facilities in the amount of 89,301,627.09 euros and for the establishment of composting sites in the amount of 1,379,638 euros were supported.** However, **the amount of financial resources** available from the EU Structural Funds for the construction of bio-waste processing facilities **was inadequate in relation to the actual investments required** at the specific stage of the development of the bio-waste management system. Namely, the available financial instruments were planned late, preventing the possibility to build the necessary bio-waste recycling infrastructure in landfills on time.

The amount of investment required to establish and maintain the system in Latvia was and still can be reduced, and in several ways.

First of all, the practice in the EU shows that **the separate bio-waste collection system need not always be set as mandatory throughout a country**, but may be set such in some municipalities. Elsewhere, when assessing the specific situation and potential solutions, decisions are made about cheaper solutions in terms of costs. For instance, separate local/ regional initiatives have been launched for separate bio-waste collection in Hungary without the introduction of a national system for the separate bio-waste collection. Considering the geographical location of Latvia and the relatively small population, the introduction of a separate bio-waste collection system in sparsely populated local and regional governments with a highly dispersed population may be a financially inappropriate solution and it may be possible to achieve the bio-waste management goals in other ways.

In addition, the costs of the separate bio-waste collection system can be reduced both by using the pre-established bio-waste recovery infrastructure, such as biogas plants, and by introducing alternatives to bio-waste use instead of investment-intensive anaerobic digestion where possible.

However, **neither** the development of the national waste management plan **nor** the elaboration of bio-waste recycling projects **has fully assessed the existing infrastructure and the required bio-waste recycling capacity.** The plan is to establish bio-waste processing facilities in six landfills in Latvia by the end of 2023. Recycling of bio-waste is possible both in anaerobic fermentation plants and composting sites located in landfills and in biogas plants located outside the territory of municipal waste landfills. Biogas plants located in the territory of the Republic of Latvia can be used for bio-waste processing – 91,050 tons per year, as they have already been issued polluting activity permits for the processing of such waste. Yet, **the role of biogas plants in the bio-waste recycling infrastructure has not been properly assessed** in the planning of the bio-waste recycling capacities required in the National Waste Management Plan.

According to the State Audit Office, a significant risk to the unjustified increase in the bio-waste management fee is posed by the fact that in the 2013-2020 programming period, the construction of significant anaerobic bio-waste digestion infrastructure facilities in six municipal waste landfills worth 90 million euros was initiated by attracting EU co-financing (completed at the Getliņi landfill), the total bio-waste recycling capacity of which exceeds the needs of Latvia significantly. According to the estimates made by the State Audit Office, with this installation, the total bio-waste recycling capacity in the territory of the Republic of Latvia will reach 380,443 tons per year **in all waste management regions, except for the Central Latvian waste management region, The planned total bio-waste recycling capacity in all waste management regions, except for the Central Latvian waste management region, will be approximately 2–2.5 times higher than the forecasted amount of bio-waste generated by households.**

This may also be due to **the problem of data quality**, which is mentioned in almost every country-wide waste management study in Latvia, and it is still relevant. For making informed decisions, including about investments and capacity of infrastructure sites, no reliable data on bio-waste quantities generated within the national and municipal administrative territories are available.

The cost of the bio-waste recycling system is also largely determined by the fact that the greatest emphasis is placed on the anaerobic bio-waste

recycling and its establishment in Latvia, **without promoting the use of other already partly existing alternatives,** for example:

- The regulatory framework **does not set criteria for composting at home**, which would allow to collect bio-waste and recycle separately at source in line with the EU target;
- A system for the **registration of composting activities** at municipal **composting sites or at home** is not developed. Essentially, all this composting activity and thus also the amount of bio-waste generated, collected, and recycled in this manner remains in the "grey zone" and is not identified, recorded or registered;
- **The use and/or adaptation** for bio-waste recycling **of the composting sites and biogas plants of the current existing bio-waste recycling infrastructure is not encouraged**, for instance, by calling for a review of the waste classes and activities specified in the polluting activity permits.

Another important factor that allows reducing the maintenance costs of the bio-waste recycling system is the further use of the final recycling product, including placing it on the market. **However, there is still no regulatory framework for determining the final status of bio-waste in Latvia**, which would allow for the efficient and safe use of compost and/or digestate obtained from bio-waste. At the same time, **a compost quality system is not introduced**, as is the case in most EU Member States. Thus, the product obtained as a result of bio-waste processing may not currently be commercialized, and there is no opportunity to reduce the bio-waste management costs by gaining income from the sale of products obtained as a result of processing.

Waste management in Latvia and Europe is already not included in the group of free services, and the increase in waste management fees is expected to continue. The financial burden correlates directly with the behaviour of the population participating in separate waste collection systems. When one separates the waste that does not have to be paid for from the total waste produced, this reduces the amount of waste that has to be paid for. This is how the principle 'polluter pays' works.

During the audit, the State Audit Office has identified significant opportunities for local and regional governments to reduce bio-waste management fees imposed on the communities if they carry out checks on the way in which waste managers keep records of the amount of waste collected from generators of waste and landfilled waste. Since local and regional governments have not ensured control, **residents at present are**

unable to be sure that the conversion factor used in the calculation of the bio-waste tariff from units of volume to units of weight is impartial and that they have not paid for the disposal of non-existent waste at the landfill. Estimates made by the State Audit Office show that, in 2020 alone, such a situation **may not have allowed local and regional governments to reduce waste management charges made to waste generators, including the population, in the amount of at least 1,220,680 euros**.

Key recommendations

Based on the audit findings and conclusions, there were 15 recommendations provided to **the MEPRD and local and regional governments** to implement an efficient and economically sound bio-waste management system and to shape a common understanding among the participants of the system on their responsibilities and requirements for bio-waste management throughout Latvia:

- Ensure the availability of complete and reliable data in waste management for impartial decision-making and monitoring of the situation;
- Safeguard that fair and economically reasonable fees for the management of bio-waste are applied to waste generators, including the population;
- Evaluate the most suitable options for types of bio-waste recycling and uses of the established infrastructure;
- Provide a comprehensive analysis of the situation in the administrative territory of each local or regional government in terms of options for the separate collection of bio-waste and its recycling (at source or at the municipal waste landfill);
- Educate the public and raise its awareness on the need and benefits of sorting biological waste.

References

[i] *Waste generation and decoupling in Europe*, available at: https://www.eea.europa.eu/data-and-maps/indicators/waste-generation-5/assessment, resource viewed on 13 July 2021.
[ii] Directive (EU) 2018/850 of the European Parliament and of the Council of 30 May 2018 amending Directive 1999/31/ EC on the landfill of waste (amending Article 5 of the Council Directive of 26 April 1999 on the landfill of waste).
[iii] *Biological waste*, available at: https://www.atkritumi.lv/lv/skirosana/biologiskie/, resource viewed on 29 July 2021.
[iv] Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98 on waste (amending Article 22 of the Directive of the European Parliament and of the Council of 19 November 2008).
[v] Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98 on waste (amending Article 22 of the Directive of the European Parliament and of the Council of 19 November 2008).
[vi] Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98 on waste (amending Article 22 of the Directive of the European Parliament and of the Council of 19 November 2008).
[vii] *Decree on the management of biodegradable kitchen waste and green garden waste*, Official Gazette of the Republic of Slovenia, No 39/10, available at: http://www.pisrs.si/Pis.web/pregledPredpisa?id=URED5366, resource viewed on 12 January 2022.
[viii] Section 2.1 of Cabinet Regulation No 184 "Regulations on Separate Collection, Preparation for Re-use, Recycling, and Recovery of Materials" of 2 April 2013, in force until 10 September 2020.
[ix] European Commission, Commission staff working document, Early warning report: Latvia, Accompanying document to the document, Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of EU waste legislation, including early warning report about EU member States that might fail in meeting the 2020 target for preparing municipal waste for re-use/ recycling, paragraph 1, available at: https://eur-lex.europa.eu/legal-content/LV/TXT/?uri=CELEX:52018SC0420, resource viewed on 15 June 2021.
[x] Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98 on waste (amending Article 22 of the Directive of the European Parliament and of the Council of 19 November 2008).
[xi] Provisional maximum fine for Latvia of 3,128 euros per day x 365 days per year + provisional maximum penalty payment for Latvia of 28,560 euros per day x 365 days per year (source: Handbook on European Court of Justice cases and infringement procedures, Ministry of Justice, page 17, available at: https://www.tm.gov.lv/lv/daliba-es/rokasgramata-par-eiropas-savienibas-tiesas-lietam-un-parkapuma-proceduram), resource viewed on 18 May 2021.
[xii] The calculation for Greater Riga waste management region has been performed for 2021, as starting from 2022, the bio-waste processing plant SAP "Getliņi" has been put into operation.
[xiii] The National Waste Management Plan 2013-2020. (Approved by Cabinet Order No 100 of 23 March 2021 "On the National Waste Management Plan for 2013–2020").