## Parallel realities

Managing plastic packaging waste in Bulgaria beyond official statistics







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## **Executive summary**

Waste management that meets the circular economy requirements is a challenge for all European Union countries, and even more so for a newer member like Bulgaria, which faces financial constraints. However, the data analysed in this report suggests that Bulgaria's waste management issues stem less from resource limitations than from weaknesses in the way it is structured. In comparative terms, 1.2% of all public spending in Bulgaria in 2022 was allocated to waste management—almost double the EU average. Despite this, the level of waste recovery achieved is unsatisfactory, and public opinion regarding these efforts does not rate them highly.

This report aims to clarify, as much as possible , the discrepancies in the data on waste in Bulgaria, as summarised from various official sources, with a focus on plastic packaging waste. First, the current model involving several private organisations for packaging waste management is reviewed. The report then examines issues with packaging waste management at the municipal level. While it is commonly accepted that Bulgaria has successfully transposed EU waste management legislation, this analysis shows that regulatory standards in Bulgaria are, in fact, very low. The report draws attention to (plastic) waste incineration projects, which have multiplied in recent years. Finally, possible solutions to improve the management of plastic waste packaging in Bulgaria are outlined.

One of the key weaknesses of the system as a whole is the quality of the statistical information on waste available. For instance, there are significant discrepancies between the data about packaging put on market as reported by the packaging waste recovery organisations (PROs), and the same data collated at the national level. Different institutions collecting data on the same material flows often state different numbers — a flaw that has already been identified in institutional analyses, but remains unresolved. While Bulgaria's official reports to Eurostat claim that a higher-than average EU recycling rate for plastic packaging waste is achieved, data from 2019 show that the reuse and recycling rate for municipal waste is below 10% in half of the country's municipalities. Some regional cities and popular tourist areas even lack a functioning separate waste collection system.

The natural conclusion is that a significant portion of plastic packaging waste is not being collected separately, but is discarded with mixed municipal waste. Thus, the responsibility for its final treatment (either incineration, or landfill) is passed on to the municipalities, which are not only financially constrained, but also fail to adopt optimal, cost-effective waste management methods. There is low efficiency in separating recyclable materials

from mixed municipal waste at the sorting facilities at regional waste management centres, which are operated by associations of neighbouring municipalities – their recovery rates do not typically exceed 10 percent. In some places the waste designated for incineration as refuse-derived fuel (RDF) is of low quality, due to the lack of a well-designed structure for the separate collection of bio-waste, construction waste, and other inert materials.

In the background of all this are the very low regulatory requirements for businesses associated with the generation and management of plastic packaging waste, particularly for packaging waste recovery organisations (PROs). For example, the minimum requirements for the capacity and density of the network of separate waste collection bins in larger cities are very low, compared to the quantities of packaging waste reported by the National Statistical Institute (NSI). In practice, in order to be able to absorb the amount of packaging waste actually being generated – and if the PROs adhered only to the minimum standards – separate collection bins would have to be available in each locality and they would have to be either emptied daily or their number should be increased by 2.5 to 3 times, in order to provide sufficient population coverage and be more convenient for households. These two conditions are a world away from the current situation, where separate waste collection bins are primarily placed in densely populated urban centres, while smaller settlements and remote areas are largely ignored. In most municipalities, separate waste collection bins are serviced far less frequently than bins for mixed municipal waste—contrary to the waste collection guidelines for Bulgaria issued by the Ministry of Environment and Water in 2011<sup>1</sup> and more recent separate collection guidelines from the European Commission in 2020<sup>2</sup>.

Waste imports and waste incineration projects are additional complicating factors. This analysis found that – apart from imported RDF for cement plants – Bulgaria has been importing 70,000–100,000 tonnes of plastic waste annually for recycling in recent years. Apparently it is easier and more profitable to feed recycling capacity with imported plastics than to invest in a holistic system for the management of domestically generated plastic waste. Additionally, the growing number of waste incineration projects in Galabovo, Sliven, Bobov Dol, Pavlikeni, Stara Zagora, Devnya, and other places undermines incentives to achieve a higher recycling rate for plastic waste.

While solutions to these identified issues—aligned with economic, social, and environmental priorities—are definitely achievable, proposing alternatives is not the focus of this report. The primary aim here is to highlight

<sup>&</sup>lt;sup>1</sup> ERS-KOS. 2011. Guide to determining the number and type of containers and equipment required for collection and transportation of recyclables and green waste, pp. 17-18.

<sup>&</sup>lt;sup>2</sup> Emptying the containers more frequently is considered easier for the end user. Therefore, the collection frequency of recyclables and biowaste should be at least as high as the collection frequency of residual waste to stimulate sorting. A combination of short collection cycles for recyclables (e.g. once or twice a week) and longer cycles for residual waste (e.g. 2 weeks) can optimise collection costs while maximising the incentives to sort at source. p. 50 of European Commission (2020). Guidance for separate collection of municipal waste:

ec.europa.eu/environment/pdf/waste/studies/15.1.%20EC\_DGENV\_Separate%20Collection\_guidance\_DEF.pdf

the weaknesses in Bulgaria's plastic packaging waste management system and to trigger an expert and public debate for a thorough reassessment and reform of the existing system.

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