

Deposit system in Lithuania minimizes littering and improves recycling



Success story

Taurage district municipality
2021-09-09

USAD is the deposit system administrator in Lithuania. The whole system was created in 2016 with the aim to minimize plastic waste in natural environment and create the motivation to return clean plastic packaging to possible recyclers. The use of plastic has grown explosively in recent years, to the amount where plastic waste is harmful not only to marine animals – tiny particles of micro plastic are already found in the bodies of humans. Not to mention it harms the aesthetical view while found in most beautiful places of nature. This material has to be collected and recycled if businesses are eager to use it further for packaging their goods. Noticing poor recycling rates deposit system was introduced in Lithuania.

We cannot prohibit the usage of plastic packaging. Some of the packaging is essential for ensuring hygiene and longer validity of food products. For this reason European Green Deal urges the acceleration of achieving higher recycling rates for plastics and other materials. European Waste Framework Directive sets rules for extended producer responsibility, where waste holders should put effort in waste re-use, take-back and collection systems. Those system allow to save virgin or primary materials as well as reduce CO2 emissions from producing a new packaging materials or released through waste incineration.

In the meantime, the European Union seeks that by 2025, 75 percent of packaging released into the market to be recovered and recycled and by 2029 this share is to grow to 90 percent .

Also the Circular Economy Action Plan aims all materials and items produced to be returned to the production cycle and 100 % recycled. This would allow not using any new materials in the production process. Customers can acquire products, wrapped into light, durable packaging but everything must get back to recycling cycle not to be send to growing landfills. This is known as ‘closing the loop’.

In 2016 the new public entity “Deposit system administrator” was created by the associations of private beverage production companies and deposit system was launched in Lithuania. Introduction of deposit system solved a number of problems – it could be called one of the best examples of circular economy. Citizens return around 90 percent of plastic bottles and aluminum cans of the total amount retailers release into market. After returning a clean package citizens receive a 10 euro cents deposit. The deposit is paid by the customer while buying the bottle, so you cannot avoid this fee. During last year, if to count piece by piece, Lithuanians have returned more than 2 billion plastic bottles, aluminum cans and glass bottles in total. Bottles that can be returned to so-called taromats have a special „D“ sign on them and a code. Then all of these packages become the property of the „Deposit system administrator“. They travel long way to the logistics center in Vilnius, the capital of Lithuania, where the materials are sorted out, washed and pressed.

After this process the journey of closing the loop continues, as they are carried to Lithuanian or foreign factories and recycled. For example, aluminum cans can be recycled numerous times. In the words of the „Deposit system administrator“ the same can that is returned to a taromat could be standing on a shelf full of drink in just 60 days . From the viewpoint of technology readiness level this system had reached the last level (9) as it continues to successfully operate for 5 years in a row.

Every year the number of bottles released into the market is growing, but so is the number of returned ones. In 2020 citizens of the small Lithuanian town Tauragė had returned 4,3 million of PET bottles, 3,68 million of aluminum cans, more than 350 thousands glass bottles and 1500 items from steel.

Packages collected through deposit system are clean and undamaged – that’s why recyclers value them, because one of the problems of materials found in sorting containers is that they are dirty. Clean packaging eases the recycling process.

Citizens of Lithuania got actively involved in using the deposit system from the first year. Now 95 percent of surveyed Lithuanians say this system has urged them to sort out various other waste – not only the ones that can be returned back to taromats.

In regards to the ISWM framework, in this case private companies had funded the creation of deposit system while taking their responsibility to collect the packages of their goods released into the marked. With the

legal support from the public authorities, investment was made for the deposit system, creating a tautomat machine network throughout Lithuania. Public was immediately involved because they were financially rewarded for acting responsibly and helping to return packages.

The new system covers the elements of collection and the transfer and transport in the later stages, because some of the materials has to be transported abroad in order to be recycled.

System had used the financial aspect – financial motivation to reach the aims of cleaner environment and reduce resources needed for the production of new packages.

Lessons learned:

1. The Lithuanian deposit system is an example how to reach high rates of collection of packaging – there are delegations coming from other countries to learn from Lithuania's case and practice. There are discussions about whether the deposit system should expand, including, for example, glass bottles from strong alcoholic drinks, because the system had visibly reduced littering problem.
2. System is one of the effective ways to encourage citizens to treat their waste sustainably and to educate them. People are motivated by the financial return but there are also new habits created in the families where kids collect packaging and receive money for their needs. Learning on this principle, we can attribute value to any kind of waste to support returning it to the system - circular economy in practice.
3. As people collect plastic, aluminum and glass packages separately, knowing that they have to be undamaged in order to be accepted by the machines, it resulted in cleaner packages that led to higher recycling rates.