

EXTENDED PRODUCER RESPONSIBILITY IN GEORGIA



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Every year, Georgia generates around 900,000 tons (t) of municipal waste.

This waste contains up to 1,000 hazardous and non-hazardous substances which pose a threat to human health and environment.

Extended Producer Responsibility (EPR) is a policy approach of waste management successfully implemented throughout Europe.

Under this tool, the producers/importers of the products take a responsibility for the proper collection and treatment of specific waste.



EPR was first formally introduced in Sweden by Thomas Lindqvist in a 1990 report to the Swedish Ministry of the Environment.



WHY EPR?

EPR contributes to

- /// Separate collection of waste and its use as a resource
 - /// Decrease of substantially open dumping of used goods in nature
 - /// Re-use, recycling and other forms of recovery of waste
 - /// Reduction of waste disposal at landfills
 - /// Safe treatment of harmful substances
 - /// Efficient use of resources and the retrieval of valuable secondary raw materials
 - /// Environmental performance of all operators involved in the life cycle of different products (importers, distributors, consumers, collectors, dismantlers, recyclers, exporters, etc)
 - /// Improvement of product design
 - /// Creation of new business and job opportunities,
- and, the most important,
- /// Reduction of negative impacts on human health and environment

The Waste Management Code of Georgia introduces the concept of Extended Producer Responsibility (EPR) for specific waste streams which will be enacted from December 2019.

WHICH SPECIFIC WASTE STREAMS ARE SUBJECT TO EPR?

- /// Packaging waste (plastic, paper/cardboard, wood, metal, glass)
- /// Waste electrical and electronic equipment (WEEE)
- /// End-of-the life tires (ELTs)
- /// Used oils
- /// End-of-the life vehicles (ELVs)
- /// Used batteries and accumulators

The following minimum targets to be achieved are defined by the National Waste Management Strategy (2016) of Georgia:

	2020	2025	2030
Used batteries	20%	50%	80%
Waste oils	50%	75%	90%
Packaging waste	40%	75%	90%
WEEE	20%	50%	80%
ELT	50%	70%	90%
Used accumulators	60%	80%	90%
ELV	20%	50%	80%



ADDITIONAL INFORMATION ON WASTE STREAMS



PACKAGING

Packaging plays a crucial role in everyday life, as it is used for both preservation of goods as well as for promotional purposes to attract the purchaser's attention; at the same time, it must be as light and durable as possible. Packaging can be made of plastic, metal, glass, paper, wood or composites. After the use of the content, packaging becomes waste and is thrown away.

To address the environmental aspects of packaging and packaging waste, measures were introduced and gradually expanded to many European countries in the 1990s. Since the introduction of the EPR, the waste hierarchy and other economic instruments as well as with the recent adoption of "Circular Economy", Europe has become a forerunner in the recycling sector. Constantly higher, more ambitious targets are set by legislation towards useful materials recovery and therefore resource efficiency. Indeed, targets for recycling of packaging waste started with a 25% figure, increased afterwards to 55% and finally revised upwards to 65% in 2018.

According to official statistics, around 195,000 t packaging wastes were generated in 2017. This trend has been gradually increasing. Georgia can benefit from the long experience of Europe and establish by the end of 2019 recycling schemes via private and public initiatives. Recycling is now at its infancy, however end-user's infrastructure is existing and can be quickly further developed. The municipalities need to introduce separate collection systems and for this reason must be provided with bins, trucks and a number of Sorting Facilities.

Obviously, the most important parameter for success is to sensitize public to be actively involved and participate in separation.

/// END-OF-LIFE VEHICLES (ELV)

Each year around 12,000 of cars are removed from the traffic and are abandoned in the streets of Georgia. This situation is not sustainable as End of Life Vehicles are regarded as hazardous waste and can lead to environmental deterioration if not treated properly.

With the introduction of EPR principle, the last owners will be provided with a network of collection points that will cover the total territory of Georgia. Free of charge delivery to an authorized collector will be a prerequisite for car deregistration. In this way, effective depollution, dismantling and eventually reuse / recycling of more than 80% metals and other useful materials from a car will be promoted.

/// BATTERIES (PORTABLE) AND ACCUMULATORS (NON-PORTABLE)

Batteries and accumulators are an integral part of our everyday life. They are indispensable in the functioning of common electrical, electronic, medical and industrial equipment, cars, etc.

According to latest figures by GeoStat, 550 t/y of portable batteries and 5,500 t/y of accumulators were put on the market.

As batteries contain substances which are harmful to the environment and metals which are recyclable (nickel, cadmium, mercury, lead, manganese, etc), entering the municipal waste stream should be avoided. EU dictates collection and treatment of all batteries according to certain standards, in order to help save resources and to prevent contamination of soils and waters in Georgia. For this scope, the management of spent batteries under the EPR should be applied.

Batteries should be clearly labelled for the end-user's information not to throw to the municipal waste bin.



/// END OF LIFE TYRES (ELTS)

End-of-life vehicles (ELV) is a waste stream that grows progressively as our transport mobility depends more and more on private cars. In Georgia their figure amounts to approx. 30,000 t/y. Tyres however are manufactured from synthetic rubber, steel and textiles. Since the introduction of the Waste management Code, the disposal to landfills of whole used tyres, is no longer allowed. This fact can be regarded as an opportunity for Georgia, as ELTs are a resource of materials and energy which recovery results in reduced greenhouse gas emissions.

Countries in EU have succeeded an impressive average 96% collection rate, which was possible due to a big range of end markets for tyre derived materials, such as: terrain for football stadiums, playgrounds, rubber asphalt construction, wheels for bins, shoes, as well as secondary fuel for cement kilns. Few applications already exist in Georgia and can be significantly expanded.

/// LUBRICANT OILS

Lubricant oils are used both by consumers in private cars as well as by business (industrial sector) to help run motor engines. As they are petroleum made, used oils are characterized as hazardous waste that need to be properly managed: they should be collected separately and treated with a view to protect the environment and human health.

According to GeoStat, the quantities of lubricating oils put on the market equal in average to 12,300 t/y in Georgia.

Waste oils have a quite high positive market value and for this reason they are traded in Georgia but not in an organized and legal way. Official collection points must be established to receive used oil from car repair shops, gas stations, industrial plants, etc. There are known industrial processes that can regenerate used oil to the quality of virgin lubricants.

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

WEEW is a term used to cover items of all types of Electrical and Electronic Equipment (EEE) and its parts that have been discarded by the owner as waste without intention of re-use”.

Among categories of WEEE are large household appliances, small household appliances, IT and telecommunications equipment, consumer equipment, lighting equipment, electrical and electronic tools (with the exception of large-scale stationary industrial tools), toys, leisure and sports equipment, medical devices (with the exception of all implanted and infected products), monitoring and control instruments, automatic dispensers.

WEEE is growing very fast worldwide. According to the estimations, its generation was forecasted to increase from 41.8 million t in 2014 to 65.4 million t in 2017 in the world.

In Georgia total market for Electrical and Electronic Equipment (EEE) for selected goods (Washing machines, Fridge, Household Air conditioner, CRT monitors and TVs, Laptop, notebook, tablet, Mobile phones, Flat panel display for computer, Flat panel TV sets) has reached 14,600 t in 2016 and it is forecasted that in 2027, consumption of same items will reach 52,000 t. The total volume of waste generated from researched above mentioned nine items, amounted to 15,700 t and 4.2 kilogrammes (kg) per inhabitant in 2017. By the rough estimation the total e-waste in 2017 might be estimated as 29,100 t, which is 7.8 kg per inhabitant.¹

Rapid economic development coupled with strong growth of EEE production and consumption is directly related to the risk of environment and human health due to toxic substances of inadequately disposed WEEE. Disposal of WEEE on landfills without protective layers and systems make hazardous compounds and heavy metals leak and contaminate soil, water and air. Such contamination is extremely risky not only for local area and people but also for remote territories and its inhabitants.

¹ *This estimation is not backed up by sufficient amount of data and needs further research for clarification. This estimation should not be considered as a reliable as it may contain a high margin of error and should only be used to get a general impression of the market.*

Heavy metals such as lead, mercury, arsenic, cadmium, selenium, hexavalent chromium and flame retardants are present in WEEE, damage environment and human health even in small doses. WEEE also contains heavy metals like nickel, copper, chromium, and zinc, which cause damage in relatively higher concentrations. These heavy metals are emitted into the environment due to improper collection and treatment of WEEE, wrongful incineration or landfilling.

Precious metals like silver (Ag), gold (Au), platinum, palladium, etc. are also represented comparatively in small amounts. It should be pointed out that rising interest of WEEE recycling and re-use practices refers to economic benefit in the recovery of valuable metals.



