

Analysis of municipal waste streams with particular emphasis on plastics in the European Union

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Abstract

Skilful management of municipal waste is becoming more and more important for the economy. For many reasons, and especially for environmental and economic reasons, it is reasonable to collect and process waste back into raw materials for further production.

The concept of a circular economy indicates, on the one hand, the minimization of the consumption of new raw materials and the generation of waste, and the extension of the product life cycle. In addition, it also pays attention to minimizing emissions and energy consumption.

Plastics are one of the resources that can be collected selectively and recycled (returned). Due to their properties, plastics are widely used in the economy, e.g. as packaging, in construction, automotive, electrical, electronic and household appliances, or in agriculture. There is a high demand for plastics and as these industries develop, demand is expected to increase even more.

The publication analyzes and evaluates municipal waste streams in the EU, with particular emphasis on plastic waste.

Legal regulations in EU Member States are intended to reduce the negative impact of waste, in particular plastics, on the environment. One area of such minimization is the elimination of plastic products that are used only once or for a very short time. It is estimated that around 80% of marine litter is plastic. Estimates indicate that they are produced annually in Europe at around 26 million tonnes. Analyzes show a general increase in the production of plastic waste in the EU and different rates of recycling of plastic (packaging) waste.

Keywords: municipal waste, plastics, reverse logistics, recycling, circular economy