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QUANTIFICATION OF LOST RESOURCE POTENTIAL OF UNSORTED TEXTILE WASTE

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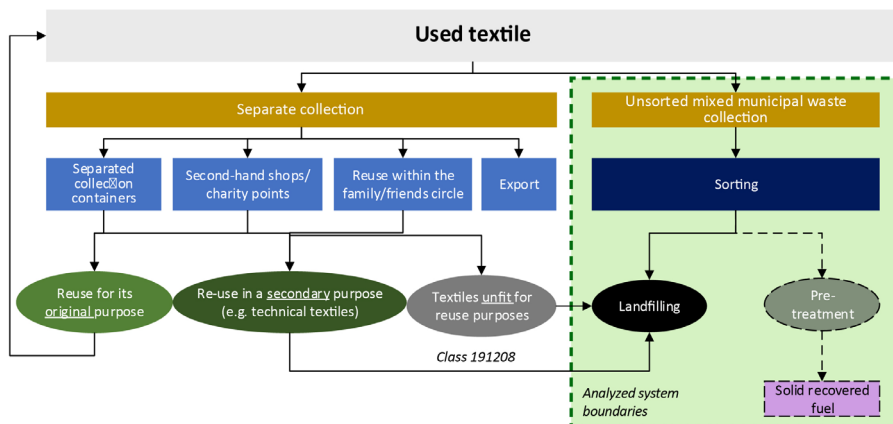
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Abstract – The European Union (EU) requirements for the separate collection of textile waste came into force in Latvia in 2023. As part of the measure, containers for the management of separated textile waste were placed in locations accessible to the public, alongside other types of separately collected waste (e.g., glass, plastic and cardboard). The containers were designed to collect textile waste that met the following requirements:

- Shoes and clothes must be clean, dry, and free of chemicals, motor oil stains and mold.
- Free from damage (holes, tears, etc.).
- Soft toys, fabric scraps and rags, shoes that are no longer a pair or are damaged, torn or have holes, as well as home textiles, are not allowed to be stored in containers.

This means that the national textile waste collection system is limited only to textiles that can be reused without additional repair or pre-treatment (e.g., washing) and the developed national textile waste collection system supplements the private initiatives existing through clothing donation points and second-hand shops. However, there is a ‘shadow’ zone related to textile waste that do not meet the abovementioned collection requirements and are not specifically regulated and managed so far at a country level, thus have to be collected in unsorted household waste containers. The objective of the present research is to quantify the amount of textile waste collected from unsorted mixed household waste containers and to quantify the physical condition and fibers of this waste. Subsequently, the environmental impact of the lost resource potential of the unsorted textile waste based on the obtained quantitative and qualitative waste data was defined via life cycle indicators.

Keywords – Cloth scarps; environmental impact; indicators; life cycle assessment; mixed household waste



System boundaries (marked as a green square) of the survey.