Ecologistics Activities in Terms of Communal Waste in Poland

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Abstract – The basic tasks of ecologistics concern such activities as : the collection, segregation, transport, disposal in chosen places and processing of waste. Ecologistics regarding waste processing in Poland faces the necessity to open to new technologies of recovery and recycling of raw materials. This will effectively influence state waste policy, contributing to efficient waste management, recognizing it as a valuable source of raw materials.

Key words – ecologistics, waste, waste management

I. Introduction

Upon the emergence of problems with one of the waste management issues to fight against the increasing amount of waste was ecologistics. Ekologistyka, the area of the oriented logistics on ecology.

The procedure of waste management is connected with ecologistics issues, that is ecological management of waste, control, and supervision of waste. The waste management means waste production and managing waste, while managing waste means collection, transport, processing waste, including supervision over such activities, as well as further handling of waste neutralization places and activities performed by a waste seller or a middleman in waste trade.[1]

In the management of waste, it is important for the proper hierarchy to deal with the waste, which will reduce the negative impact on the environment and optimal use of the substances contained in the waste.

The basic tasks of ecologistics concern such activities as: the collection, segregation, transport, disposal in chosen places and processing of waste.

II. Ecologistics activities

In managing waste it is important to keep the appropriate hierarchy of ways of waste handling, that is: preventing waste production, reducing the nuisance of waste for people and environment; recycling; other procedures of recovery; waste neutralization; waste disposal. Thus, ecologistics contributes to: making the system of waste management more tight at the source, reducing the amount of communal waste, creating a greater number of modern recovery facilities, the elimination of illegal landfills.

Implementing ecologistics in a company contributes to obtaining meaningful savings (for example, used-up or broken items instead of thrown away may be re-used though recycling, secondary purchase). Moreover, one needs to notice the market potential in waste, illustrated by the following prices of secondary raw materials per ton: scrap: 750-900 PLN [3], aluminum 3500 PLN [4], glass 200 PLN [5], PET: 800-1200 PLN [5], waste paper: 300 PLN [6].

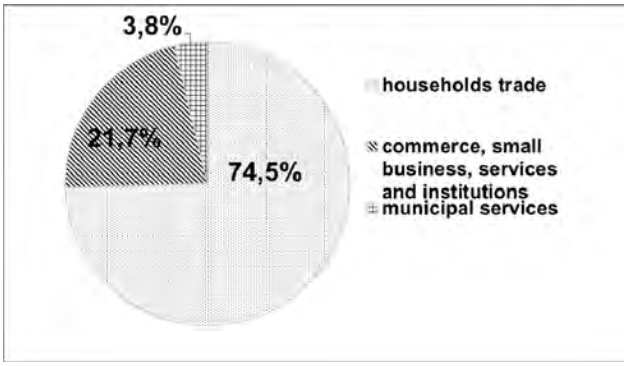

Fig. 1. The structure of the mixed municipal waste origin collected in Poland in 2013

Source: own elaboration based on the [2]

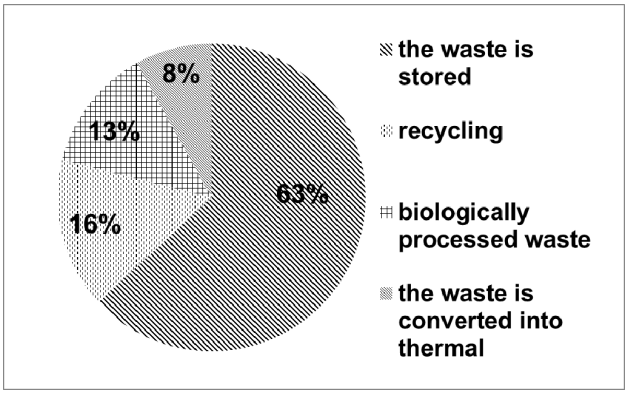

Fig. 2. Management of municipal waste in Poland in 2013

Source: own elaboration based on the [2]

Ecologistics in respect of a waste-incineration plant in Poland was a significant improvement from the entry into force of the new law on waste in 2013 Before making it happen ecologistics was extremely difficult, due to: adequately developed the necessary infrastructure (few of the incineration plant in 2013 - 8% of the waste heat of the transformed), 90% of municipal waste was exported to landfill (in 2013 fall to 63%), low levels of abstraction of secondary raw materials (2013-recycling of 16%).

Ecologistics activities are supported by the document in force „Krajowy Plan Gospodarki Odpadami 2014" (National Waste Management Plan) (KPGO)[1], which includes as the most important tasks in the forthcoming perspective till 2020 [8]:

- provision of a system of communal waste collection for all residents no later than 2015;
- provision of a system of selective communal waste collection for all residents no later than 2015;
- reduction of biodegradable communal waste, disposed at landfills, in such a way that in 2020 there shall be no more than 35% of waste amount produced in comparison with 1995;
- the reduction of disposed communal waste to max. 60% of those produced before 2014;

[1] National Waste Management Plan account shall be taken of the requirements of EU legislation in the field of waste management [7]

- preparation for re-use and recycling waste material, at least paper, metal, plastics and glass from households, and if possible waste of other origin similar to household waste at least at the level of 50% of its amount to 2020;
- achieving and maintaining (from 2014) the recovery of packaging at the level of 60 %;
- achieving and maintaining (from 2014) the recycling of all packaging at the level of 55 %.

Ekologistyka has an impact on waste management hierarchies using the principle of „four" (4R) [9]:

- Reduce.
- Reuse.
- Recycling.
- Rebuy.

Ecologistics focuses predominantly on the efficient collection of waste and then, their segregation and processing as well as effective transport, which should contribute to minimizing the waste in action – disposal at selected locations.

Conclusion

Ecologistics regarding waste processing in Poland faces the necessity to open to new technologies of recovery and recycling of raw materials. This will effectively influence state waste policy, contributing to efficient waste management, recognizing it as a valuable source of raw materials.

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