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UTILIZATION METHODS OF SOLID HOUSEHOLD WASTE

The problem of household waste being potentially dangerous both for people health and the environment is considered in the article. The methods being used for neutralizing solid waste are given. The scale of the problem has been described.

Key words: ecological problem, solid household waste, utilization, landfills, composting, incineration.

At present waste is one of the major up-to-date ecological problems being potentially dangerous for people health as well as for environment. In many countries the problem of misunderstanding all the consequences of the problem dealing with solid household waste may arise. Unfortunately, as the result of the above misunderstanding, there are no strict regulations as well as prerequisite legal acts regulating the problems concerning wastes and litter [1].

Nowadays pollution is very harmful to environment. It is mainly caused by people improper activities. Harm from factories and processing enterprises operation results to huge damage. The problem of accumulating and recycling wastes endangering environment needs its solution as wastes are being spread out, accumulating in large quantities and exerting negative impact on setting. Proper waste recycling is a huge step towards improving the environment.

For the last decades many countries of the world suffer from increased quantity of solid household waste as urban trash that makes up 150 – 300 kg/year in average per capita. Annual increase in the number of solid household waste makes up not less than 3% and in some countries nearly 10% [3]. The solution of the problem can't be restricted by finding the only way of recycling. The main task of each method is to fulfill the task, not allowing the spread of harmful bacteria and microorganisms. At the same time, it is necessary to minimize harmful substances being released in the course of recycling [2]. The commonly used methods of neutralizing solid waste are landfills, composting and incineration.

Let us consider these methods in detail. Throwing daily waste/garbage in the landfills is the method being most widely-spread today. This process of waste disposal focuses on burying the waste in the land. Landfills are commonly found in developing countries. There is a process used that eliminates the odors and dangers of waste before it is placed into the ground. While it is true this is the most popular form of waste disposal, it is certainly far from the only procedure and one that may also bring with it an assortment of space.

This method is becoming less popular these days due to lack of space available as well as methane and other landfill gases, that may cause numerous contamination problems. Landfills give rise to air and water pollution which severely affects the environment and can prove fatal to the lives of humans and animals. Many areas are reconsidering the use of landfills [4].

Composting is another most frequently used waste disposal or treatment method which is the controlled aerobic decomposition of organic waste materials by the action of small invertebrates and microorganisms. The most common composting techniques include static pile composting, vermi-composting, windrow composting and in-vessel composting [5] Incineration or combustion is a type disposal method in which municipal solid wastes are burned at high temperatures so as to convert them into residue and gaseous products. The greatest advantage of this method is in its ability to reduce the volume of solid waste from 20 to 30 % of the original volume, decrease both space they take up and stress on landfills. This process is also known as thermal treatment where solid waste materials are converted by incinerators into heat, gas, steam and ash [6,7].

On the basis of the above mentioned the conclusion should be made that researching the processes taking place in biosphere and the impact of household human activity show, that only creating ecologically non-waste and small-scale productions could prevent resources impoverishment and environment degradation. People economic activity should be build on the principal of nature ecosystems economically expending substance and energy and where some organisms waste serve as habitat for others, i.e. circulation of substances is taking place.

Despite huge scale of the problem of waste exporting it is being solved. Each inhabitant of the planet should start dealing with the pollution problem. Only integrated approach to this global problem involving the states, local authorities and people of the planet could minimize consequences of waste harmful effects on the ecosystem.

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