STUDIU DE EVALUARE A IMPACTULUI ASUPRA MEDIULUI AFERENT COLECTĂRII DEŞEURILOR MENAJERE ÎN ORAŞUL CIACOVA ŞI ÎN COMUNELE ÎNVECINATE

ASSESSING THE IMPACT OF HOUSEHOLD WASTES ON THE ENVIRONMENT IN THE TOWN OF CIACOVA AND NEIGHBOURING VILLAGES (TIMIS COUNTY)

V. ŞTEFAN, ANIŞOARA DUMA-COPCEA, CASIANA MIHUŢ, CAROLINA ŞTEFAN

University of Agricultural Sciences and Veterinary Medicine of the Banat' Timişoara

***Abstract**: Material valorisation of wastes supposes separating them through different ways into valorisable components. Since separating already mixed wastes, and particularly household wastes, s only possible with great expenses ad is, in most cases, unsatisfactorily, we should use all the possibilities of selective collection of materials alone or per material groups before mixing it with other waste parts. In this respect, we suggest pre/selection at the waste source into two fractions: biodegradable ad valorisable.*

***Rezumat:** Valorificarea materială a deşeului presupune separarea sa pe diferite căi, în componente valorificabile. Deoarece o separare a gunoiului amestecat deja, mai ales a celui menajer, nu este posibilă decât cu cheltuieli foarte mari şi este nesatisfăcătoare de cele mai multe ori trebuie, folosite toate posibilităţile de colectare selectivă a fiecărui material în parte sau a fiecărei grupe de material, înainte de amestecarea cu alte părţi reziduale. În această privinţă se propune preselectarea la sursă a deşeurilor pe două fracţiuni: biodegradabile şi valorificabile*

***Key words**: soil, physical and chemical features*
Cuvinte cheie: sol, proprietăţi fizice şi chimice

INTRODUCERE

The policy of the European Community concerning environmental protection aims at systematically use natural resources, climate protection, biological diversity protection, population health, etc.

It is represented by the adoption and implementation of the Directive 2000/12/EC concerning wastes and providing a unitary legislative frame in the field.

Romania is expected to observe this Directive in accordance with the commitments in the complementary position document / Chapter 22 "Environment".

Thus, in our country the obligation of avoiding waste production is stipulated in the Law 426/2001 concerning the modification of the Government Ordinance 78/2000 concerning the status if wastes.

Thus, it is not only about valorising in full responsibility waste removal, but also about taking the necessary measures to limit waste production.

This objective can only be reached by encouraging clean technologies and reusable and recyclable products. Reintroducing and reusing wastes as raw matter is a domain that should be enhanced, but to do so we need special prescriptions.

GOAL AND OBJECTIVES

The goal of this study is to build up a composting platform, a waste compaction and transfer station with a view to increase the process of selective collection of wastes, to diminish the volume of biodegradable wastes, of the uncontrolled amount of stored wastes, and to assess

the impact of waste accumulations on the environment through the implementation of a sustainable and efficient system of waste management.

Material valorisation of wastes supposes separating them through different ways into valorisable components.

Since separating already mixed wastes, and particularly household wastes, s only possible with great expenses ad is, in most cases, unsatisfactorily, we should use all the possibilities of selective collection of materials alone or per material groups before mixing it with other waste parts. In this respect, we suggest pre/selection at the waste source into two fractions: biodegradable ad valorisable.

"Biodegradable" waste means compostable wastes, and "valorisable" waste means un-compostable wastes but sortable in order to valorise them in the sorting station or on the sorting platform.

Implementing the study will result in the building up of facilities for the bio/mechanical treatment of the wastes, that is to process 3,415 cubic meters of wastes annually in the town of Ciacova ad in the villages of Giera, Pãdureni, Ghilad, Jubel, and Libling.

Thus, the volume of stored wastes will diminish with 4% and that of uncontrolled stored wastes, with 97%.

The objective of this environmental impact study is to identify soil, water, and air pollution sources and to recommend solutions for the minimisation of environmental pollution and for the pollution of the population in the town of Ciacova and in the neighbouring villages.

Priorities in waste management

The increase of selective collection minute will be done by enforcing selective collection into two waste fractions by sorting out wastes in the sorting station.

Enforcing selective collection will be done by properly equipping polluters with differentiated recipients for each type of waste.

Diminishing waste volume will be done by removing from storage the biodegradable waste fraction and by composting in order to valorise it through the following:

- selecting dry wastes to be valorised in the sorting station or on the sorting platform;
- compacting wastes in a compaction and transfer station.

Diminishing the amount of biodegradable wastes will be done by promoting the home composting method actively among the inhabitants (free of charge equipment, taxation system, promotion campaign).

Because of the relatively low level of mean income per inhabitant, in the target area we estimate that a minimum of 30% of the waste amounts will be used in urban areas and a minimum of 50% of the waste amounts will be used in rural areas.

Diminishing the impact of waste deposits on the environment supposes that the entire amount of wastes be carried ad stored in a storage facility in accordance with the environmental protection standards thus eliminating the negative impact of improper waste storage.

The diminution of the uncontrolled stored waste amounts will be done by expanding the area of the sanitation service to areas that have never benefited from it so far.

Description of the functioning process

The necessity of considerably diminishing the amounts of wastes carried mainly to the ecological storage site that reach environmental and sustainable protection objectives of the project asked, due to the mainly predominant bio-degradable structure of the wastes in the area, the inclusion of a composting station in the system proposed.

The fundamenting of the choice of building a composting station is based first on the structure of the wastes in the area.

Organic wastes collected selectively represent a potential which, with the help of biological methods, can be subjected to a material checking up.

Due to the fact that its share in the household wastes in the area is large – 78.5% in urban areas and 90.0% the rural area, this fraction should be given the attention it deserves.

Compared to usable wastes, this is where the most important diminution of waste amounts can be done, resulting in the protection of the reserves at the storage platforms.

The amount of provisioned bio-degradable wastes to be collected in the target area of the project calculated depending on the generation index – the number of inhabitants and the structure of the wastes – is 6,906 m^3 annually of which they will compost annually 2,049 m^3 of bio-degradable wastes, for a provisioning until 2028.

Description of the process of land reclaim and recovery

At the beginning of the activities with impact on the environment, as well as upon the changing of the actor of some activity, including liquidities selling, fusion, partition, licence, dissolution followed by liquidation, it is a must to ask and get an environmental licence to establish environmental obligations.

Closure operations should be based on a project developed on the ground of a closure plan, with all the licences asked by the present legislation.

The deposit operator must develop a fund for the closure and post-closure of the storage site, called „Fund for the closure of the waste storage site and for the post-closure monitoring".

The closure of the dumping site is done using the „Fund for the closure of the waste storage site and for the post-closure monitoring".

The closure of the dumping site and the recovery of the land will be done in accordance with the Order of the Ministry of the Environment and Water Management no. 757/2004 for the acknowledgement of the Technical norms concerning waste storage.

Upon removal of the soil covering system strata used in the construction phase of the dumping site basis we should bear in mind the following:

- keeping possible wastes;
- avoiding leakage by insulating the soil to avoid contamination of phreatic waters;
- preventing uncontrolled gases escape from the storage site or the penetration of the air into the waste mass.

Soil structure recovery works will be done by covering the storage site with:

- a gleysation layer made of sterile material 25 cm thick;
- a loam layer 50 cm thick;
- a vegetal layer 50 cm thick.

After rehabilitation, we will protect the area by planting grassy plants, graminaceae and other vegetal species with short roots in order not to deteriorate the tightening layer.

The operator is also responsible for the storage site post-closure maintenance, surveillance, monitoring, and control.

CONCLUSIONS

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