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Urban Greening and Life Quality

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Abstract: Greening the urban and rural localities concerns to the achievement and maintenance of hygiene of the settlement, on which depends the quality of life. The paper presents aspects of greening cities in Romania and the impact of pollution produced by landfills on the quality of life. Uncontrolled urban waste storage is one of the important causes of environmental pollution, respectively of surface water and groundwater, air and soil.

Keywords: greening, urban, urban waste, life quality.

1. INTRODUCTION

The term of greening has a complex meaning refers to all measures to maintain the environmental conditions necessary for insurance human life and health. It is used, however, for actions to achieve and maintain the cleanliness of a city, being synonymous with sanitation. According to the laws of our country sanitation is a local public service which is responsible for pre-collection, collection, transportation and disposal of solid wastes. Urban greening (sanitation) should contribute to maintaining the environment, public health and a frame of civilized life. It will deal with urban waste collection and disposal of municipal waste (from households, institutions, from public spaces, parks, streets, green areas, and sludge from treatment plants). The increase of residue was changed with selective waste separation at source, before collection, and directing them to centralized treatment points. In this way recover some raw materials and reduce the volume of waste to be stored.

2. GREENING OF LOCALITIES IN ROMANIA

Activity analysis of greening of localities in Romania was made based on the results of social research and press information.

In Romania, from approximately 13,400 localities only 263 cities and municipalities and some villages in the area of influence of large cities receive sanitation services (Table 1).

The structure of the urban network in Romania **Table 1**

Cities and municipalities	No. localities	% from no. localities	Total inhabitants	% from total inhabitants
Small cities < 20.000	154	58,5	1.630.781	13,3
Medium cities 20.000-99.999	85	32,3	3.677.416	30,1
Major cities 100.000-999.999	33	8,8	4.927.201	40,2
Largest cities >1000000	1	0,4	2.009.200	16,4
Total	263	100	12244598	100

Statistical Yearbook of Romania, 2002

The worst situation is of Bucharest, whose population is 16.4% of urban population, both in terms of waste collection and storage. The structure of urban waste, household waste have the highest percentage (75-80%), than street waste (10-12%), the municipal sewage sludge (7-9%), demolition waste (7-9 %), excavation (3-4%), etc.

The national strategy for waste management shows that in 2000 the amount of municipal waste increased with 19.2% over 1995, and the growth trend will continue.

Household waste, which have the largest share in urban waste, including waste from homes - cooking, packaging, newspaper, textile waste, broken appliances and institutions or various economic units (trade, industry).

Household sanitation is achieved by pre-collection, collection, transport and storage at municipal waste dumps. These municipal waste landfills are generally mixed (60%) being able to store both domestic waste and hazardous industrial waste. 87% of the waste deposits are located outside cities, towns built 7% and 6% on the riverbanks.

The area occupied by these deposits is approximately 1236 ha, which represents 9% of the area occupied by deposits.

Street sanitation is mainly intended to achieve and maintain public hygiene review in order to raise the comfort level city. This includes sweeping streets and

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sidewalks, road watering, removal of surplus land from the gullies, placement and emptying trash bins, cleaning up uncontrolled waste deposits, snow removal and control of glazed frost by spreading anti-skid material.

In Romania cleanliness of the streets of several cities deteriorated because of insufficient measures taken by local administrations and the population neglect.

3. POLLUTION IMPACT OF LANDFILLS ON LIFE QUALITY

Number of ecological landfills in Romania is low; most deposits do not meet EU regulations. Most are improperly placed to population centers, being sources of pollution and public infection outbreaks.

The main sources of impact and risk arising from municipal landfills are:

- changes in landscape and visual discomfort;
- air pollution;
- pollution of surface waters;
- changes of soil fertility and composition of biocoenosis on adjacent lands;
- participation in the generation of greenhouse effect and climate change;
- disposal from natural and economic cycles of some lands.

One frequent impact of these deposits occurs in the atmosphere, through which they spread odors emanating from urban waste. Once with the odors emanating from garbage decaying enter people's homes and swarms of flies which multiply in the household rubbish. To these are added and rats, stray cats and dogs that increase the risk of epidemic spread. This situation is the dump from Glina (Bucharest), Bistrita (smoke from fires at the landfill was spread in all districts), Part (Timisoara), Suceava (Suceava River downstream of the city is polluted by runoff from landfill).

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In addition to household waste from human activities, industries produce waste which, if not dangerous can be collected by the sanitation services. Hazardous wastes have a special regime (collection, treatment, neutralization, destruction or storage). Most hazardous waste came from the chemical industry, oil refining, thermal processes, etc. and stored in 83 warehouses covering an area of 450 ha. Some of these deposits are abandoned because factories or chemical plants they served were closed. They are a risk of ecological disaster and undermine both the environment and human health

Thus, Turda Chemical Plants produced DDT which was used in agriculture to control pest and by the population to combat insects. Since 1998 was the liquidation procedure, having a stock of 15,000 tons of DDT that was deposited on the surface or shallow buried. Presence of DDT was found in potato and milk of cows and sheep.

To Fälticeni produce an unprecedented environmental catastrophe in that part of the country, as a result of cyanide and ammonia pollution of some rivers courses, destroying fish population and falling ill many people. The cause was a company producing detergents and plexiglass and has entered into liquidation having a stock of 200 tons of cyanide which was not neutralized prior to closing the plant. From the deposit pipes were discharged to sewerage of Fälticeni Municipality very dangerous toxic substances which have reached the final in Siret River. This concentration of cyanide and ammonia exceeded 100 times the maximum permissible level and led to the deaths of hundreds of kilograms of fish poisoning that has been used by many locals. Also, fish was sold illegally in Pascani and Iasi which made more than 60 people were hospitalized and 150 outpatients were treated.

For the state of environment and population health, a particular danger is hazardous waste from agriculture such as pesticides and their packaging. Household waste plant are nearly 2000 tons of which 43.9% are prohibited substances, 48.7% are substances that exceeded shelf life and 7.4% unidentified substances. To these are added over 23,000 sheet metal and plastic cans contaminated with these substances.

Hazardous waste is a major risk to public health and environmental conditions since:

- packages containing hazardous waste is stored in a high degree of degradation, so the quantities of toxic products can spread, contaminating large areas of land;
- rains, floods that can facilitate the spreading of waste on a wide area and their penetration into ground water and surface water;
- unconscious person can bring in packages of specialized companies' logo these wastes, and then sell them as pesticides, endangering public health and life;
- packaging of hazardous waste can reach in people possession that can use for various purposes;
- hazardous waste can result in degradation products more toxic and biological effects particularly dangerous to humans.

There are still large quantities of pesticide waste and not taken out due to weather spread and contaminate soil, groundwater and surface waters.

Thus, in 2002, in Mures county, from storage of pesticides and chemical fertilizers, found in an advanced stage of degradation, toxic substances were released affecting Agrieș River. Poisoned fish was consumed by locals, falling ill seriously 22 people including 9 children.

Another case is the marketing of pesticide waste packed in plastic bags under different names. Farmers have bought at low prices and used them to control pest plants and animals. There was a strong DDT pollution, with carcinogenic effects on humans and has been found in cow's milk and sheep, and the culture of potatoes.

Another category of hazardous wastes to human health is the dangerous hospital waste. They are eliminated in our country by burning in the crematories. This treatment is incomplete and caused

the emission of gaseous pollutants and infectious biological materials, which are a risk both for hospitals, and for the people in their vicinity.

Some hospitals discard contaminated waste directly to municipal landfills.

Complete destruction of these wastes are insured only in incinerators, which are special installations for waste burning at high temperatures, being fitted with equipment for containment and cleaning gas to prevent air pollution.

Another category of hazardous waste is the used oils of different types of batteries and accumulators, oil residues, etc. There are legislative regulations that provide procedures for recovery, treatment, neutralization and storage.

Municipal waste are threats to the environment if improperly managed, it leads to air pollution and contamination of drinking water supplies. The effects turn up on the population, affecting its health. Pathogens in the air, water, soil and food are major causes of disease.

It was found a direct link between birth defects and proximity to landfills.

4. UNCONTROLLED URBAN WASTE IN ROMANIA

One of the most visible pollution is pollution with urban waste from uncontrolled disposal due to population and by economic agents.

Disposal of municipal waste at random in undeveloped areas, led to their accumulation and harmful impact on the environment and human health. A current form of street trade, dominated by kiosks or boutiques, contributes to mountains of garbage with all kinds of packaging and food or vegetable scraps. Urban waste problem in our country has become more acute and have not yet found the management solutions and recycling of solid wastes.

Thus, Bucharest is the most polluted European capital. This is due largely to domestic waste pollution, thrown at random from the central city to outlying areas where there are mountains of garbage. In outlying areas, where the population is poor, household garbage will continue to pollute the environment and in the future.

Also, some companies to save fuel and not paying the storage fee, throw garbage at the side of access roads to landfill.

As regards rural areas, the situation is worse because, in Romania, sanitation is only carried out at the city and only a few villages close to cities. As a result, the population of villages has recourse to uncontrolled storage of household waste (domestic and agricultural). Garbage is disposed of or river bed or on gullies of the outskirts of villages. This creates an unpleasant aspect of the village and a danger to the environment and human health.

Waste management in rural areas is poor because the collection is not organized in a centralized system, and waste disposal is done at dispersed locations at the edge of settlements being affected agricultural areas, water courses, hydraulic works, communication routes.

In rural area landfill is done on sites established by local councils, unprepared and unauthorized. Usually, storage of household waste is carried out uncontrolled, unorganized, in places other than those set.

According to the National Waste Management Plan by 07.16.2009 must be closed and rehabilitated all storage spaces of household waste from rural areas.

Local councils should establish a timetable for closure and greening of rural deposits depending on the opening transfer stations and regional deposits. A priority has been the closure of rural deposits with high risk for environment and health.

In Timis County, in 2000, in all areas through which passes Bega, from source to exit the country, it was found that river beds are a garbage dump. The waste is stored, not only rivers beds but also in irrigation channels or even on the field. These situations have led to measures of the authorities and civil society, gathering cleaning and waste deposited in unauthorized places.

5. GREEN STORAGE OF URBAN WASTE IN ROMANIA

Regulating the storage of waste in our country, aims to prevent or reduce negative environmental impacts, particularly pollution of surface and groundwater, soil, air, and any risk to human health throughout life the deposit, and after its expiry.

Very important is the objective of reducing the amount of biodegradable waste, which through elimination of methane, contribute to air pollution and increasing greenhouse effect.

Also, for localities with a population less than 20,000 inhabitants must make a deposit to serve more localities like this. There are details on the requirements for all classes of deposits, acceptance criteria and procedures for waste storage and procedures control and tracking of landfills.

In our country were initiated actions to identify the areas suitable for development of new sites for waste storage, and internal or international funding sources.

It is expected that through the selective collection and recovery of recyclable waste, the volume of waste to be stored is reduced by half, leading to increased in time to fill and use the deposit.

Finding new municipal landfill is pressing for major cities in our country.

And in rural areas were initiated actions for achieving ecological waste deposits such as in Suceava County, in the village Marginea and Bogdănești.

The state of poverty that included more people put the lot under the minimum subsistence level. For some of them, the only remaining source of life is garbage, from where recovering food scraps and various packaging materials that can be sold. They live, often in cardboard huts on the outskirts of landfills, without any facilities, assailed by heavy stench and by swarms of flies, rats and stray dogs. They recovered from scrap metal to altered food which they sell to farmers.

Due to the difficult living conditions, the occupation in a toxic environment, low levels of health education, hygiene of these communities are at the lowest level, and disease chances are very high, especially for children. As a result, are very common digestive, pulmonary diseases and of circulatory system. Also, many people from them suffer from anemia, malnutrition and rickets, visible effects, especially in children's normal development. Of those presented results the unsatisfactory status of cities greening in Romania, both because of the shortcomings of some sanitation services and low levels of environmental education of the population.

Remedy these deficiencies involves all social backgrounds and political forces, to initiate and implement projects that offer people a better work and life environment.

As a result, the Ministry of Waters and Environment Protection has initiated national programs is focusing on the problem of waste: „Clean Romania” and „Recycle paper”.

The objectives of these programs are considering, besides ensuring the preservation and protection in line with sustainable development, education, information and public accountability in the actions to ensure a clean environment and efficient recovery of waste

6. CONCLUSIONS

The main sources of soil pollution requiring an ecological reconstruction are household waste, industrial waste deposits, decommissioned industrial sites and zootechnical checks. Is necessary for reconstruction of damaged targets by beekeeping activities, namely storage space manure and liquid manure from livestock farms and existing zootechnical complexes.

The main problems related to waste management are:

- the existence of improper waste disposal facilities in rural areas. With the expansion of waste collection services to village level, development of transport system, transfer and zonal landfills, landfills in rural areas will be closed and rehabilitated.

- large amount of biodegradable municipal waste that are stored. Because of lack of selective waste collection system, the vast majority of household waste goes directly in deposits, increasing the amount of waste stored.

- lack of own storage stations for their industrial waste disposal. A number of economic agents remain with radioactive waste or waste resulting from prospecting, extraction, processing and storage of mineral resources and exploitation of quarries, which must be stored in a suitable space.

- lack of transfer stations. Improper storage, temporary or permanent of waste is major risk factors causing sometimes catastrophic effects, exacerbated by other factors.

In Romania, the main aspects of the ecological crisis are determined by high air pollution, of water and soil in some areas, particularly industrial, and by

hygiene poor condition of most localities, due to the accumulation of industrial and municipal waste – household waste.

Thus, in Timișoara, Bega River water is polluted due to discharge of household and industrial wastewater partially treated.

In Timis county aquifer layer has exceeded the maximum permitted limits to indicator of organic substances, ammonia and phosphates in Bega, Timis, Bârzava, and Aranca Catchment.

As a result, the greenings of localities is part of the environmental policies of our country, and some of their cleaning activities, including those relating to waste disposal, are under the jurisdiction of several institutions of central administration, Ministry of Waters and Environment Protection is the most high authority decision-making and control waste management.

Our country has made great efforts to improve environmental legislation, by aligning it with EU requirements and provisions. In this direction fall the legislative regulations referring both on sanitation services for localities and on waste management, to eliminate the risk they represent to human health and the environment. In Romania there are still problems of waste management and their management infrastructure due to increased consumption and changing lifestyle of the population.

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