

Progress report
Russian-Danish project of development of local self-government
Gusev Municipality – Kaliningrad – Russia
Odense Municipality / Odense Waste Management Company - Denmark

June, 2009

The work on the development of a waste management concept in Gusev Municipality is proceeding to completion.

During the Russian-Danish project great work has been done to study the experience of Odense Municipality.

Three cooperative working meetings have been held. We discussed the following issues with Danish partners: the system of coordinated work with budget organizations (schools, infant schools), companies which render social services, trading and industrial companies, the arrangement of container yards and their improvement, supply with the required amount of new containers, use of metal containers for bulk waste, use of modern dumptrucks with automatic back loading of containers, "multilift" type of dumptrucks, planning of sorting and separation of solid household waste.

We received detailed instructions on waste collection, recycling, transportation and disposal and on a number of decisions concerning the management of particular types of waste and methods of their recycling and disposal, for instance, recycling of paper, tires, construction and packing waste as well as the disposal of waste on dump sites and its incineration. Danish experts told us how Municipality controls the process of waste management on its territory, creating waste management rules, which include detailed comprehensive instructions on the collection, recycling, transportation and disposal of waste.

We have collected a considerable amount of data in the sphere of waste management; though a deeper study of these technologies and the development of possible alternatives to the implemented solutions will contribute greatly to the development of a waste management concept. It is especially important to find a solution, which could http://www.multitran.ru/c/m.exe?t=3700600_2_1 raise effectiveness of the use of finance when dealing with waste (recyclables), its further treatment. This would considerably decrease the amount of waste, significantly reduce the loading of landfills and, above all, reduce the number of dump sites.

Unfortunately, nowadays there is a number of negative factors:

- the existing system and technology of waste collection and disposal does not meet the requirements and engenders discontent of the majority of the population;
- citizens are not informed well enough about the sanitary requirements and the safety principles of the collection and disposal of solid household waste;
- the existing http://www.multitran.ru/c/m.exe?a=110&t=3893824_2_1&sc=312 waste containers and sites do not meet the sanitary requirements and do not undergo sanitation; they are a serious hazard to the health of people;
- waste containers are used for collection of mixed garbage and do not have lids; the waste is collected in huge amounts, and its transportation is untimely. When the weather is windy, the neighboring territories are greatly polluted with litter.

At this juncture, the priority variant of life-support is to design and implement an integrated system of household and industrial waste management, to develop a sanitation system for both municipal and processing waste, which should be based on the strategic course of the establishment of an industrial base for waste processing and reduction of landfills.

The overall objective of the Concept is to analyze the existing situation in the region, to get an insight into the situation and find possible solutions to the problem using European and Danish experience.

The target goal is achieved via the following tasks:

- to develop an appropriate regulatory and legal framework (based on the positive experience of the city of Odense) to regulate the whole process of waste management;
- to create economic conditions for the fullest use of recyclable waste in production;
- to create legal environment and favorable economic conditions for small and medium-sized businesses to deal in recyclables.

Therefore, the structure of the Concept comprises the following sections:

1. The analysis of major groups and sources of household and industrial waste.
2. The analysis of the existing waste management system/the system of municipal and processing waste treatment.
3. The analysis of European experience in the sphere of waste management.
4. A model of waste management.
5. An advanced system of solid waste management.
6. Sorting, disposal and recycling of solid waste.
7. The system of construction and bulky waste management.
8. The system of medical waste management.
9. The system of industrial waste management.
10. Rehabilitation of dump sites.
11. The stages of implementation of an advanced waste management system.

The mechanisms of decision-making, which form the basis of the Concept, are priority-oriented and account for the consequences of the decisions in economical, social and environmental spheres.

The present Concept provides a basis for the development of an action plan of the fullest waste collection and recycling, which would facilitate the creation of favorable conditions for meeting international environmental standards and requirements in the context of extending integration of the Russian Federation into world and European Community.

1. THE ANALYSIS OF MAJOR GROUPS AND SOURCES OF HOUSEHOLD AND INDUSTRIAL WASTE

1.1. The analysis of sources of solid household waste.

The sources of solid household waste in Gusev are population, public and social institutions and industrial establishments, which operate in the territory of the district. Therefore, the amounts and fractional composition of solid household waste, produced in our territory, were analyzed.

1.1.1. Solid waste from households.

1.1.2. Solid waste from the objects of the infrastructure.

1.1.3. Solid waste from industrial establishments and public institutions.

1.1.4. The amount of solid household waste illegally disposed in open dumps.

1.1. The analysis of morphologic composition of solid household waste.

Cotton waste contaminated with oil derivatives.

Plastic and polyethylen waste.

Non-ferrous metals.

Ferrous metals.

Saline wastes.

Accumulator units, batteries.

Wood residue.

Solid waste from households.

Solid waste from industrial establishments and public institutions.

Waste liquids contaminated with oil.

Uncontaminated cotton waste.

Rubber goods.

Tires and wheel covers.

Solid oily waste.

Paper waste.

Wastes for further incineration.

Fraction for further composting.

Manure.

Waste (fall-out) from cesspools and residential sewage.

Glass waste.

Asbestos containing waste http://www.multitrans.ru/c/m.exe?a=110&t=4334008_2_1&sc=8.

Medical waste.

Sludge deposits in sewage dispersal plants.

Luminescence lamps and other mercury containing appliances.

Hazardous industrial waste.

Slag residuals, refuse burnout.

Spoils.

Mining industry waste.

Bulky waste from households and organizations.

2. THE ANALYSIS OF THE EXISTING WASTE MANAGEMENT SYSTEM

2.1. The analysis of the sanitation management structure.

2.1.1. The functions of the sanitation management objects.

2.1.2. The structure of sanitation management.

The functions of sanitation purification are divided as follows:

1. Municipal Duma adopts normative legal acts binding in the territory of the municipality, which regulate collection and disposal of solid household waste.

2. Municipal Administrations:

- organize collection and disposal of household waste in the territory of the municipality;
- if necessary, build up municipal establishments for waste collection and disposal;
- enlist the services of business entities and citizens for waste collection, transportation and disposal;
- control the activity of entrepreneurs and organizations dealing in waste collection, transportation and disposal;
- arrange cleaning-up and sanitary activities, http://www.multitrans.ru/c/m.exe?a=110&t=4238504_2_1&sc=0improvement of the territory, attracting the population, legal persons and businessmen;
- inform the population, legal persons and businessmen of waste management matters in order to meet environmental and sanitary requirements by means of mass media (publishing the corresponding materials), discussion of the problems at public meetings;
- assist entrepreneurs and legal persons, operating in the field of solid household waste collection and disposal, in development and agreement of waste transportation schedules, and control that the schedules are communicated to all the interested persons;
- exercise other powers in accordance with the applicable legislation, municipal regulations, and other decisions.

3. Municipal utilities of housing and community amenities perform the required technical regulation.

4. The Directorate of Russian Federal Consumer Rights Protection and Human Health Control Service ensures that sanitary requirements are met at all the stages of waste management;

2.2. The analysis of the structure of financial flows in the sphere of sanitation.

2.3. The analysis of legal framework in the sphere of sanitation.

The efficiency of the existing system of waste management is based on laws and bylaws.

Legal regulation of household and industrial waste management is performed via the following laws and regulatory acts:

- laws and other normative legal acts of the Russian Federation;
- laws and other normative legal acts of the Region;
- municipal legal acts.

2.3.1. Laws and normative legal acts of the Russian Federation.

The analysis of regulatory and legal framework of waste management revealed the necessity to work out and adopt a number of regulatory acts, ensuring the development of a waste management system and regulating the treatment of waste and http://www.multitrans.ru/c/m.exe?a=110&t=2676494_2_1&sc=51secondary resources at each stage:

1. Resolution on the establishment of a waste generation monitoring system in Nizhegorodskaya Oblast.
 2. Resolution on approval of the methods of estimation of the waste management services target costs.
 3. Resolution on approval of the procedures regulating the use of funds on the rehabilitation of dump sites.
 4. Resolution on approval of the procedures of motor vehicle waste treatment.
 5. Resolution on approval of the procedures of organic derivatives processing by composting.
 6. The development of recommendations on the exploitation and rehabilitation of disposal sites and etc.
- 2.4. The analysis of social tools.

Improvement in the environmental and economical efficiency of the existing solid waste management system is possible only if its social component is taken into consideration.

Nevertheless, the majority of the population is not aware of the ecological consequences of the existing waste treatment practice in the region, the health and welfare risks involved. People throw garbage everywhere, incinerate rubbish, dispose waste illegally and etc. The citizens do not want to sort waste or make contracts for sanitation, they are against waste management tariffs raising. This situation has resulted from the lack of educational programs about waste treatment for people at large. Besides, the population is not involved into the process of waste management decision-making.

The informational system and the involvement of the population in the process of decision-making in the sphere of sanitation are actually missing. The information functions are to be performed by practically all the departments of the sanitation management system, however, these activities are not carried out. Public opinion in this sphere has not been examined, that is why it is hard to predict the impact of any measures in the field of sanitation.

Such situation may frustrate any efforts on the restructuring of the existing waste management system. Lack of awareness about economic, environmental and social problems of waste management among the population may cause a negative response to the solutions on the improvement of waste management efficiency. Any policy or decisions dictated to the population on the top-down principle may lead to misunderstanding and eventually cause passive setting out.

Reformation of such a many-sided area as waste management should be developed using the interactive approach. The interactive approach suggests involvement of all the interested parties at every stage of waste management decision-making; in order to implement this approach, a number of appropriate mechanisms should be developed. Reformation of the existing waste management system should be brought to the attention of the public through various methods and programs, aimed at information and involvement of the population in the process of waste management decision-making.

The use of interactive approach will facilitate further social work to a large extent, because the interested parties (including public members) will consult the population at the stage of decision-making, and the population will be ready for the innovations. Interactive approach means that it is necessary to consider the order of planning and conducting activities on the information and involvement of the population, because a number of activities should precede the implementation of any innovations. For example, explanatory programs, devoted to sorting and separation of waste, should precede the implementation of the corresponding practices.

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