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## **Czestochowa municipal company as an entity performing commune's own tasks in terms of waste management in Czestochowa city**

**Adam Brzeszczak\*, Lidia Czuma-Imiołczyk**

Faculty of Management, Czestochowa University of Technology, Czestochowa, Poland

\*E-mail address: [adam.brzeszczak@gmail.com](mailto:adam.brzeszczak@gmail.com)

### **ABSTRACT**

The elaboration below concerns commune's own tasks in terms of municipal waste management. It describes commune's responsibilities that result from the Act in that matter. The considerations included in the elaboration were based on the system functioning in the city of Czestochowa. It describes Czestochowa Municipal Company, Ltd. [Częstochowskie Przedsiębiorstwo Komunalne Sp. z o.o.] in Sobuczyna, and how it operates. It presents its object of economic activity and tasks that it undertakes in the municipal waste management system and utilises in the waste collection and transportation system. The elaboration includes the analysis of the municipal waste management system in the city of Czestochowa. It describes waste management plan introduced in the city of Czestochowa.

**Keywords:** Waste management system, commune's own tasks, waste flow, waste management plan, Czestochowa Municipal Company

### **1. INTRODUCTION**

Local development includes all changes and processes occurring in the area of commune, district or province that have a positive influence on a given area. It should increase the resident's comfort of living and adapt to their preferences. Local government

units looking over the infrastructure development should however adapt to the principles of sustainable development.

The waste management system is an important component of the economy. Whether it concerns industrial or municipal waste it is well organised in its optimal aspect, while taking general rules of waste management into consideration.

Municipal waste flow, due to the multitude of the processes that occur in it, is a particular object of interest in waste management. The management requires efficiency of all entities in the system. Particularly important place is taken by the local government that is responsible for collecting and proper managing of waste.

Czestochowa Municipal Company, Ltd. in Sobuczyna is responsible for organising and managing the waste management system. Main task of the company is waste management in the most economically beneficial and ecologically appropriate way.

## **2. COMMUNE'S OWN TASKS IN TERMS OF WASTE MANAGEMENT**

Waste management is increasingly common phenomenon, for many years the waste resulting from economic activity and living of a human being were used and processed. Waste management became an important component of the economy that was responsible for minimising negative results of human activity on natural environment. Efficient waste management system became a priority not only in big and environmentally conscious company, but also is an important component of the environmental policy of the counts. According to the Waste Management Act from 14th December 2012 waste management is understood as *“collection, transportation, processing of the waste, including supervising such activities as well as further handling with places of neutralising of waste and activities carried out as a dealer or broker in trading waste”*.

Waste management act of 14th December 2012 assumes taking over the ownership of the waste by the communes what includes the responsibility of managing the municipal waste. Introducing the waste management system enables the execution of commune's own task which is enabling the cleanliness and orderliness in the commune and creating the necessary conditions for their maintenance. As a result of changes in the Maintaining Cleanliness and Orderliness in Communes Act, the commune is responsible for collection and disposal of the waste. As part of the assigned tasks the commune is obliged to:

- include in the waste management system all property owners in the area of the commune,
- supervise the execution of municipal waste management tasks including entities collecting the waste from property owners,
- introduce system of selective waste management, including fractions of waste such as: paper, metal, plastic, glass and composite packaging as well as biodegradable municipal waste, including biodegradable packaging waste,
- arrange easily accessible points of selective waste collection that ensure collecting from the commune residents such waste as: expired drugs and chemicals used batteries and accumulators, used electric and electronic equipment, furniture and other oversized waste, used tires, green waste as well as construction and demolition waste which are municipal waste,

- achieve appropriate level of recycling, adapt to re-use and recovery, reduce the number of biodegradable waste through landfilling.

Commune's task is also to conduct educational and informational activities in the field of proper municipal waste management, especially in the context of selective collection. Commune's tasks include sharing through website, and other commonly established means, information that regard entities collecting municipal waste from properties in the area of the commune.

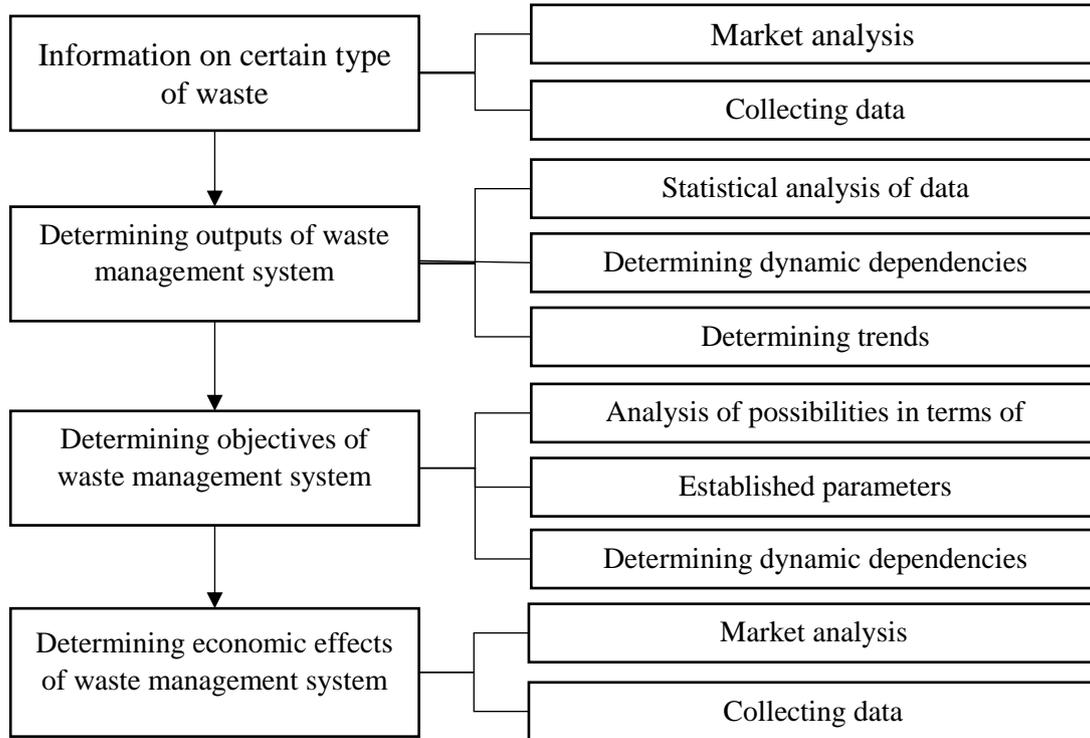
Commune's task is also conducting educational and informational activities in terms of appropriate municipal waste management, especially in the aspect of selective collection. Commune's tasks include sharing through website, and other commonly established means, information that regard entities collecting municipal waste from properties in the area of the commune. Such information should include name of the company, seat, address of the waste collecting entity, and places of managing municipal, mixed and green waste as well as residues from sorting waste. Commune's tasks also include presenting information about the achieved recycling levels, preparation for re-use and recovery through different methods and reducing the number of biodegradable waste through landfilling. Communes perform analysis of waste management status due to the verification of technical and organisational possibilities of waste management. Commune's tasks include constructing, maintaining, exploitation of own or shared units of regional installations for processing the municipal waste [Polish abbreviation:] (RIPOK). They are also responsible for keeping records of contracts for collecting the municipal waste from property owners due to requirement of controlling the execution of the responsibilities by the property owners that result from the Act.

## **2. WASTE MANAGEMENT SYSTEM**

Development of an effective waste collection system requires experience in terms of solving problems in various fields. Waste management system is a combination of many elements and activities in the area of management, logistics, environmental protection, finance and economics. It is essential for the system to implement both basic objectives of environmental protection and waste management objectives, such as:

- limiting overall number of waste through its reduction and recycling,
- recycling and reuse of materials as secondary raw materials in production processes, as well as the energy recovery from waste,
- introducing biological waste again to the natural environment,
- appropriate landfilling of waste not suitable for recycling or disposal,
- creating of flexible waste management system that accounts for variability of number and quality of waste.

Implementation of the environmental protection objectives requires developing appropriate waste management systems. It is a difficult task that require following specific stages that enable the creation of suitable system that meets the established requirements and control of the agreed actions. Stages of creation and control of waste management system are presented in figure 1.



**Figure 1.** Stages of creation and control of waste management system

[Source: A. Mesjasz-Lech: *Efektywność ekonomiczna i sprawność ekologiczna logistyki zwrotnej*. [Economic effectiveness and ecological efficiency of reverse logistics.] Wydawnictwo Politechniki Częstochowskiej. [Publishing of Częstochowa University of Technology] Częstochowa 2012, p. 36.]

### 3. WASTE MANAGEMENT PLAN IN CZĘSTOCHOWA CITY

Częstochowa, as well as other units of local government, is legally obliged to prepare individual plan of waste management, taking account of national requirements and standards. The objective of “Waste Management Plan for Częstochowa City for 2010 – 2014 with the perspective until 2017” [„Plan Gospodarki Odpadami dla Miasta Częstochowy na lata 2010 – 2014 z perspektywą do 2017 r.”] was the overall analysis of the current state of waste management in the city, determining the directions of the planned changes and presenting proposals for reconstructing the waste management system. The plan consists of ecological situation and determines the most important actions in the field of waste management in the city.

Waste Management Plan for the City of Częstochowa, describes in detail the status of waste management, having regard for division into various groups of waste. Municipal waste is of particular interest for the commune. It was classified accordingly with the generic groups of waste, with the main division into municipal waste that is segregated and selectively accumulated, garden and park waste (including cemeteries) and other municipal waste.

Waste Management Plan in Częstochowa, in the aspect of municipal waste, assumed a number of solutions aimed at improving the collection system. Among them one can

distinguish solutions to [Planu Gospodarki Odpadami dla Miasta Częstochowy na lata 2010 – 2014 z perspektywą do 2017 r.].

- Extend the system of selective collection (paper, plastic, glass) onto the whole area of multifamily housing,
- Introduce the selective waste collection system in the area of single-family housing,
- Use of double-container collection separating wet and dry waste in the area of single- and multifamily housing,
- Introduce collection system for oversized and repair and construction waste in the city area,
- Use of model for collecting hazardous waste at source, and from the stream of municipal waste,
- Build on the premises of Częstochowa Municipal Company, Ltd. in Sobuczyna, a waste management plant, that include such departments as: sorting, composting, construction and repair waste chopping station, oversized waste demolition station, and municipal point of hazardous waste and used electric and electronic equipment collection.

Such objectives were accepted as the best solutions in ecological and economical aspect in terms of municipal waste collection. The implementation of such system allows firstly the recovery of waste, then its disposal, considering landfilling as a final solution.

The commune, in order to implement the objectives of municipal waste management system, has introduced regulations of maintaining cleanliness and orderliness. The regulations set out in detail the principles of maintaining orderliness and cleanliness in Częstochowa, concerning [Regulamin utrzymania czystości i porządku na terenie miasta Częstochowy]:

- Requirements concerning maintaining cleanliness and orderliness in the area of properties regarding:
  - Conducting the selective collection of municipal waste, including hazardous waste, oversized waste and repair waste,
  - Liquidation of mud, snow, ice and other debris from the area of the property determined for public use (e.g. sidewalks),
  - Mechanical and cleaning works with the vehicles outside carwashes and repair shops.
- Types of containers and equipment used for collecting municipal waste in the city, and their minimum capacity, distribution conditions, sanitary and technical condition, accounting for:
  - Average number of municipal waste produced in households,
  - Number of users of such equipment.
- Method and frequency of municipal waste disposal from the properties and urban areas,
- Level of biodegradable waste in landfills,
- Responsibilities of people having pets in terms of removing impurities from the areas of common use,
- Maintenance needs of livestock outside agricultural areas.

Waste Management Plan for Częstochowa City adopts a variant of activity, ensuring the minimisation of impact of municipal waste on the environment, by subjecting the waste firstly to the process of recycling, then their disposal, considering landfilling as a final solution. Such variant is also characterised by minimising financial outlays for municipal waste management. It shows that activities of the city are carried out based on the principles of ecologicistic concept characterised by minimising negative impact on the environment while optimising costs allocated for waste flow management.

#### 4. WASTE MANAGEMENT SYSTEM PERFORMANCE WITH AN EXAMPLE OF CZESTOCHOWA MUNICIPAL COMPANY

Częstochowa City Council Resolution created the Department of Waste Management. The department was converted in 1997 into limited liability company. Currently it bears the name of Częstochowa Municipal Company, Ltd. In Sobuczyna [Częstochowskie Przedsiębiorstwo Komunalne Sp. z o.o. w Sobuczynie], “CzPK Sp. z o.o.” in short, in which the total shareholder is the city of Częstochowa.

Częstochowa Municipal Company, Ltd. in Sobuczyna manages the municipal waste management system in Częstochowa. Its primary tasks were formulated in the mission that concerns activities in the field of waste management in the most economically efficient and ecologically appropriate way [Deklaracja Środowiskowa EMAS Częstochowskiego Przedsiębiorstwa Komunalnego Sp. z o.o, wydanie IX, lipiec 2016].

The company’s tasks are carried out with the consideration of the applicable standards and regulations. The objectives of the company’s politics are carried out thanks to properly chosen structure of employees trained in the field of waste management.

Częstochowa Municipal Company, Ltd. in Sobuczyna performs tasks related to management of waste other than hazardous and inert. Mainly, they are unsegregated municipal waste, they constitute around 85% of the waste transported to the landfill. Among others, one may distinguish waste other than hazardous that is being collected selectively or not selectively. Main tasks of the company are storing, disposal and recycling of the collected waste. All tasks of CzPK [Częstochowa Municipal Company] can be divided into three groups that are presented in Table 1.

**Table 1.** Company’s line of business  
Source: Information Folder of Częstochowa Municipal Company

<b>Waste management in terms of:</b>
collecting, receiving, storing and transport,
disposal through landfilling,
recovery and recycling,
recovering and disposal,
managing the waste management system,

<b>Maintaining and managing properties in terms of:</b>
maintaining orderliness in the urban areas within the contracted own tasks of the Częstochowa commune,
management the properties owned by the Company,
<b>Investment activities in terms of:</b>
investments necessary to meet the legal requirements associated with waste management,
investments within contracted own tasks of the Częstochowa commune,
other activity consistent with the founding act of the Company.

In the field of waste management, the Company covers the area of Region I of Silesia Province, i.e. districts of: Częstochowa, Kłobuck, Myszków, Lubliniec and Zawiercie, and cities with district rights of these areas. The tasks of CzPK Sp. z o.o. [Częstochowa Municipal Company, Ltd.] are carried out through installations of waste processing that have the status of regional installations RIPOK (regional installation for processing the municipal waste) Storing the waste within such installation is done on the basis of administrative decisions and in accordance with the applicable law.

Important component that aims at environmental protection is, functioning within the company, the Stationary Point of Municipal Waste Collection [Stacjonarny Punkt Selektywnego Zbierania Odpadów Komunalnych (SPSZOK)]. It is fully-equipped facility enabling the collection and temporary storage of municipal waste, including hazardous, renovation and oversized waste from the residents of Częstochowa. It was built at the Częstochowa Municipal Company, Ltd. in Sobuczyna. SPSZOK operates within the self-service system, selectively collected municipal waste can be disposed in special bins and containers. [<http://www.czpk.czestochowa.um.gov.pl/spszok> (odczyt 27.02.2017)]

The company, in addition to implementing the tasks related to its line of business, which is waste management, deals with the activity in the field of maintaining and managing the properties and investment activities. According to the resolution of Częstochowa City Council of 28th December 2012 the company is responsible for performing the Częstochowa Commune's mandatory tasks of maintaining cleanliness and orderliness within the administrative borders of Częstochowa city. CzPK has been entrusted with this task for the period of 10 years from the date the resolution comes into force. It covers overall direction of the system of maintaining cleanliness and orderliness in the Częstochowa Commune. The company also actively participates in various urban initiatives, e.g. equipping recreational areas in Park Lisiniec. The company is also responsible for managing, maintaining cleanliness and taking care of good technical condition of the properties owned by the company.

The company's consistency in proper, systemic managing of the waste management, using proven technology, having relevant credentials, and years of company's experience enables achieving economical and ecological effects in the field of performed tasks.

## 5. CONCLUSIONS

Municipal waste flow, due to the multitude of the processes that occur in it, is a particular object of interest in waste management. Managing the waste requires efficiency of all entities within the system. Particularly important place is taken by the local government that is responsible for collecting and proper managing of waste. The right combination of ecologic policies and government unit activities in waste management promotes the environmental protection and economic efficiency resulting from waste management. Waste Management Plan for Częstochowa City adopts a variant of activity, ensuring the minimisation of impact of municipal waste on the environment, by subjecting the waste firstly to the process of recycling, then their disposal, considering landfilling as a final solution. Such variant is characterised by minimising financial outlays for municipal waste management. In order to carry out specific tasks in the plan, a waste management system has been created in Częstochowa. Częstochowa Municipal Company, Ltd. in Sobuczyna is responsible for organising and managing the waste management system. Main task of the company is waste management in the most economically beneficial and ecologically appropriate way. The company pursues its goal based on certified systems and standards, that are conditioning the Integrated Environmental Management, using appropriately chosen structure of employees trained in the field of waste management. The company's consistent policy in proper, systemic managing of the waste management, using proven technology, having relevant credentials, and years of company's experience enables achieving economical and ecological effects in the field of performed tasks.

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