



GOOD PRACTICE

SOFIA MUNICIPALITY:

HAZARDOUS WASTE COLLECTION

September 2014



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1. GENERAL INFORMATION ON THE GOOD PRACTICE (GP)

1.1 General information

Region	Sofia
Country	Bulgaria
Short name of the good practice	Separate collection of hazardous household waste
Geographical level of implementation (country, region, municipality...)	Territory of Municipality of Sofia
Target group	Citizens
Date of implementation/duration	2012
Waste stream (and subcategory)	hazardous household waste
Legal framework	Law of Waste Management
Main local instruments involved	Door-to-door collection by request and in mobile collection point
Scale (pilot/partially roll out /roll out)	Roll out
Initiator/coordinator	Municipality of Sofia
Demography	
Population	1 257 434 (2011)
Number of households	572 510 (2011)
Area (km ²)	1 311
Population density (number of inhabitants/km ²)	959 (2011)
General waste data (Not necessarily related to the GP but to give some background information. Data about the GP should be included under 3.1)	
Year of the following waste data	2011
Sum of all waste streams excl. residual & bulky waste (kg/inhabitant/year) (Use indicator 1 or 2 from the R4R Online Tool)	39.48
Residual waste (including sorting residues) (kg/inhabitant/year) (Use indicator 8 or 9 from	190.07

the R4R Online Tool)	
Total waste (add up the previous two)	229.55
Sum of all waste streams excl. residual & bulky waste to DREC (kg/inhabitant/year) (Use indicator 3 of the R4R Online Tool)	39.48

1.2 Context

In relation to the obligation in the new Law on Waste Management, mayors have to organize separate collection of household hazardous waste outside the scope of the regulations for widespread waste and sending them for recycling, energy recovery or disposal. Also more frequent calls from citizens in Sofia Municipality on where to dispose of household hazardous waste (mostly mercury thermometers), made Sofia Municipality to seek partners to organize services for citizens. Such a partner was found in the person of BalBok[®] Engineering. The company was established in order to implement the best international practices in hazardous waste management and the development of new methods and technologies for waste treatment. For over twenty years since its establishment, the company has established a successful integrated treatment system for waste generated on the territory of Bulgaria.

BalBok Engineering has developed an automated waste information system that allows tracking the movement of each batch admitted for treatment of waste and ensures the certification of recovery or disposal. Thus, for each type of delivered waste, the waste producers receive not only documents but are also ensured that their waste is treated in accordance with the requirements of EU and national legislation and scientific advances in the field of waste management, environmental protection and sustainable development.

1.3 Short description

In the beginning of 2012 Sofia Municipality started the system for separate collection of hazardous household waste. The system includes receiving of the waste in situ at the holder or in Mobile collection points, providing transportation and packaging for safe transport, subsequent treatment and disposal. The main groups of hazardous waste which are collected from households are:

1. Mercury and Mercury-containing equipment (excluding fluorescent lamps);
2. Painting materials;
3. Household cleaners and chemicals;
4. Inks and contaminated packaging;
5. Pharmaceutical products – expired drugs;

6. Other hazardous waste which is thrown in municipal waste containers or on the municipal property, which composition and properties create a risk to human health.

Hazardous waste shall be collected by households after the request in advance on an universal telephone number (the price of a local number) and in the mobile collection point once a month with no cost to the citizens. Transportation and disposal is carried out by the contractor licensed to work with hazardous waste. The system of separate collection of hazardous waste from households is financed by Sofia municipality and is free to citizens and provides maximum comfort when citizens give their hazardous waste. It was met with great interest from citizens of Sofia. Evidence of the effectiveness is a significant amount of hazardous waste collected.

1.4 Objective

Hazardous waste in the general waste stream has a negative impact on human health; they pollute the environment, and disrupt the normal operation of landfills. Through this GP Sofia Municipality aims to reduce the amount of hazardous waste in the general waste stream, by creating a working system that provides separate collection of hazardous waste generated.

1.5 Method used to identify the good practice

This good practice is identified through evolution and benchmark. Before we start operating the system for separate collection of household hazardous waste, this waste had not been collected separately and had gone directly to the general waste stream. So after starting the system, it has a very good development. The model, collection by request, Sofia Municipality has borrowed from the other successful system for the collection of WEEE, which has been in operation since 2010.

1.6 External factors

After the start of the practice the national legislation has changed and the obligation was introduced for municipalities to organize the separate collection and recovery of hazardous household waste for which extended producer's principle is not applied.

There is no link between this GP and other external factors.

2. IMPLEMENTATION

2.1 Preparation phase

This GP has started as a one-year pilot project on the territory of Sofia Municipality. The purpose of this project was to see if the citizens will benefit from the service, and to identify which option would be more appropriate - service application or a mobile collection point, and not least what resources will be needed annually for financing the system.

2.2 Technical implementation

Hazardous waste shall be collected by households after the request in advance on an universal telephone number (the price of a local number) and in the mobile collection point once a month with no cost to the citizens.

The line is open from 9.00 to 18.00 on weekdays and there is an answering machine through the weekend.

Preliminary information of the request is:

- Type and quantity of the waste
- Address of request
- Name and phone number

Applications are accepted from Sofia Inspectorate too, upon detection of the presence of hazardous waste around solid waste containers or other public places.

Time table of the Mobile collection point shall be approved each year by the Municipality and includes the date, time, and location of points for each of the 24 regions of Sofia Municipality.

Current information about the locations of Mobile collection point may find on the website of Sofia Municipality and "BalBok Engineering". The frequency of collection is at least once per month each time in the different regions of Sofia Municipality.

The collection Mobile point is placed at suitable locations allowing parking on a paved area. The locations shall be in the neighbourhood of shopping centres, public places, etc. in order to collect as much hazardous waste from primarily private households as possible. The staff working at the

collection points shall have proper knowledge and training. The following operations are carried out in the collection points:

- Reception of hazardous waste collected from private households within the relevant region and registration of the quantity and type of waste
- Minor sorting and repacking, marking and labelling of hazardous waste received from private households in the region.

The operator of the mobile collection point shall act as guide to the citizens on hazardous waste matters, including conveying to the citizens that hazardous waste must not be thrown away as normal household waste but shall be delivered to the collection point, further recommendations on storing of the waste may be provided stressing the importance of keeping the waste divided in original packaging and tightly closed.

The operator must follow some guidelines when sorting and subsequently packing the received hazardous waste into the dedicated containers. For instance, the individual containers are not allowed to contain substances which may inter-react and cause:

- Combustion and/or development of much heat,
- Development of flammable and/or toxic gases,
- Formation of corrosive components, or
- Formation of unstable components.

The collected waste is sent to a pre-treatment facility for temporary storage, separation by type and further repackaging and preparation in order to meet the requirements of the respective recovery/disposal facility.

Transportation and disposal is carried out by a company licensed to operate with hazardous waste.

2.3 Communicative implementation

The Information campaign of the system for separate collection of hazardous household waste has launched shortly before the start of the system. The system was well advertised in major national television, cable television, newspapers, internet publications, web sites of Sofia Municipality and "BalBok Engineering". The measures for awareness raising included preparation of a brochure to be printed each year in the required number of copies and spread in public places and administrations. The brochure contains information about major classes of household hazardous waste which is collected, how people can distinguish them, which are hazardous waste and hazard symbols on packaging, working time for sending requests, telephone number, and information about the mobile station.

Before deploying the mobile station, information is sent to the media.

Since the launch of the project the system has a great interest from the media and citizens.



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Включването на отпадъци с опасни свойства в общия поток битови отпадъци влияе отрицателно върху здравето на хората, замърсява околната среда и нарушава нормалната експлоатация на депата.

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- Домакински препарати, химикали
- Мазтила и замърсени опаковки
- Фармацевтични продукти (лекарства с изтекъл срок на годност)

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2.4 Organisations involved

Organizations involved in GP are Sofia Municipality as principals and carried out by "BalBok Engineering". The company was selected through public tender and the following activities are assigned: distribution of brochures, acceptance of requests, collection, transportation, and organizing recycling, recovery or disposal of hazardous waste from households.

2.5 Key success factors

- The legal requirement for separate collection of hazardous waste is the main factor that played an important role in the implementation of this GP
- The effort of the municipality and "BalBok Engineering" for the organization and implementation of a system for separate collection of household hazardous waste and turning it into a successful GP
- A successful information campaign, launched just before the start of the system, including brochures, publications, participation of representatives of the municipality and "BalBok Engineering" in TV and radio interviews, after which the number of interested and willing to participate in the system significantly increases
- Feedback - direct relationship with the owners of hazardous waste during a visit at the request of address or mobile collection point. The collection of hazardous waste from home address is attended by a representative of the municipality.

2.6 Resources

Funding is provided by the budget of Sofia Municipality. The funds provided are annual and are transferred to Balbok Engineering after submission of monthly invoice for completed activities: service - call centre, visiting addresses, mobile collection point, the quantity of collected waste in unit prices under contract, printing and distribution of brochures.

3. RESULTS

3.1 Monitoring of the progress of the GP

	2012 (kg)	2013 (kg)
Packaging containing hazardous substances or contaminated by dangerous substances	125.105	86.22
Solvents	69.60	153.75
Acids	23.72	96.92
Basics	19.58	33.58
Photographic chemicals and preparations	8.18	31.93
Pesticides	12.34	26.80
Fluorescent tubes and other mercury-containing waste - no mercury containing lamps	59.31	38.12
Paints, oils, glues / adhesives and resins containing dangerous substances	296.48	723.71
Detergents containing dangerous substances	24.46	68.60
Cytotoxic and cytostatic medicines	262.72	595.54
All	901.495	1 885.17

The collected waste is sent to a pre-treatment facility for temporary storage, separation by type and further repackaging and preparation in order to meet the requirements of the respective recycling, energy recovery or disposal facility.

3.2 Other results

Benefits to the environment and health of people and animals, because before the introduction of the system, household hazardous waste which is going to landfills mixed with the municipal solid waste and the environmentally responsible people were forced to keep them in their homes.

4. LESSONS LEARNED

4.1 Negative effects

So far, no negative effects of the system in separate collection of household hazardous waste.

4.2 Challenges

The challenge is how to learn citizens to be responsible towards the environment and health of people and animals not to dispose of unregulated hazardous waste generated in households.

5. PICTURES AND OTHER DOCUMENTATION





6. FURTHER INFORMATION

Organisation	Sofia Municipality
Address	Moskovska 33 Sofia 1000 Bulgaria
Contact person	Plamen Kazakov
Phone	+359 29377550
E-mail address	p_kazakov@sofia.bg
Website	http://www.sofia.bg/
Others	

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