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Central European University in part fulfilment of the
Degree of Master of Science**

**Analysis of the past and current developments of municipal waste management in
Sofia, Bulgaria, and a proposal for future actions**

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Budapest

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<candidate's signature>

Ivelina GEORGIEVA

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List of Abbreviations

The Bank	European Investment Bank
BGN	Bulgarian lev – the currency
BNAO	Bulgarian National Audit Office
BNT	Bulgarian National Television
BSP	Bulgarian Socialist Party
CEE	Central and Eastern Europe
EEA	Executive Environmental Agency
EIA	Environmental Impact Assessment
EIB or Equest	Equest Investments Balkans
EU	European Union
EUR	Euro
IC	Initiative Committee
MOEW	Ministry of Environment and Waters
MRF	Movement for Rights and Freedoms
MSW	Municipal solid waste
NGO	Non-governmental organization
NIMBY	Not-in-my-backyard
RIEW	Regional Inspectorate of Environment and Waters
SAC	Supreme Administrative Court
SCC	Sofia City Council
SEA	Strategic Environmental Assessment
SWOT	Strengths, weaknesses, opportunities and threats
UFD	Union of Free Democrats

List of Names

Atanasova, Milena	Separation and recycling expert in Ecobulpack
Arsov, Krasimir	Previous city councilor
Belcheva, Mihaela	Participant in Suhodol protests
Boiadjiiska, Maria	The current deputy mayor for the environment
Borisov, Boiko	Current mayor of Sofia since 2005
Bulecopack	Organization responsible for the separate collection and recycling of packaging waste
Chistota Iskur	The operator of the Suhodol landfill
Chistota Sofia	One of the previous concessionaires (until April 2007) of the waste management in Sofia
Chukurovo	Mines, potential site for storage of waste
DITZ	One of the previous concessionaires (until April 2007) of the waste management in Sofia
Ecobulpack	Organization responsible for the separate collection and recycling of packaging waste
Ecopack	Organization responsible for the separate collection and recycling of packaging waste
Gaitanski, Rumén	The owner of DITZ and Volf 96; also controls Chistota Sofia
Ganev, Ginio	Ombudsman of Bulgaria
Gerdjikov, Minko	Deputy mayor of Sofia
Han Bogrov	A potential site for the future waste treatment facility
Hlebarov, Ivaylo	NGO Za Zemiata, specialized in waste
Iskur	Baling site and Sofia district
Karlovo	One of the municipalities where the bales from Sofia are currently landfilled

Karolev, Vladimir	Current city councilor
Kostova, Valia	Waste expert in the Green Party
Kremikovtzi	Baling site and Sofia district; a potential site for the future waste treatment facility
Manova, Neli	The chairwoman of the environment commission in the municipality
Marinov, Iliia	Director of Bulecopack
Marinov, Marin	Chairman of citizens' group Trebich
Mihailov, Milor	The previous (until 2006) deputy mayor of the environment
Nozharov, Sterio	Director Investment policy in the Ministry of Environment and Waters
Plovdiv/Tzalapitza	One of the municipalities where the bales from Sofia are currently landfilled
Radeva, Lorita	Chairwoman of citizens' group Druzhiba
Repack	Organization responsible for the separate collection and recycling of packaging waste
Sofianski, Stefan	Mayor of Sofia for the period 1995-2005
Stefanov, Angel	Ombudsman of Sofia
Suhodol	The landfill near Sofia and a Sofia district
Traikov, Petur	Environment Director in Sofia municipality
Trebich	Baling site and Sofia district
Volf 96	One of the previous concessionaires (until April 2007) of the waste management in Sofia
Zhelev, Nikolay	A city councilor

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THE CENTRAL EUROPEAN UNIVERSITY

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Ivelina GEORGIEVA

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The problems with waste in Sofia are not new, but during the last several years the issue has been exacerbated. Since 2002 there have been regular protests against the landfill in Suhodol, and since 2005 – the baling sites. The administration has made many promises, almost none of them actually followed, unless under the pressure of protests and road blockades. Currently, the bales of waste are shipped 250 km away to other cities' landfills. Still there is no long-term solution in sight. The administration has tried to find alternative places for a new landfill, but the population in all locations protests vehemently against. There are plans for a waste treatment facility but still nothing is actually done.

Economic interests lay in the basis of the waste crisis, intermingled with political scuffles. The administration in the face of the mayor and the city council showed incompetence, negligence and total lack of administrative skills when dealing with the issue.

The broken promises and the lack of communication and transparency for any waste related information created total mistrust of the public towards the administration. Currently, every action of the municipality is viewed with suspicion and people are ready to protest at the mentioning of potential sites for waste storage.

Unless the attitude of the administration towards transparency and communication with the public changes, no trust between the municipality and the citizens could be built and, subsequently, the protests would not stop. The economic and political issues can be resolved by designing an integrated waste management system, involving the public every step of the way. An important issue that needs to be resolved is the problem with the lack of responsibility and compliance with regulations on behalf of the administration.

Keywords: waste management, Sofia, public participation, Sofia waste crisis, political and economic interests

Introduction

Introduction to waste management

Municipal solid waste (MSW) encompasses all waste generated by households, public area waste and commercial waste. If we are to categorize it by material, then MSW consists of paper, yard waste, plastics, wood, food waste, textiles, glass, metal and others. According to the European Commission Directorate on the Environment (DG Env 1999) the quantity of municipal waste increases rapidly and in 1995 it was a total of 200 million tons. Unfortunately, despite all regulation aiming at the opposite, most of the European Union (EU) municipal waste is disposed of at landfills or incinerated, which are the least preferred options for waste treatment according to the EU waste management framework directive (EC 2006). Both of these treatment methods have severe environmental and health impacts (DG Env 1999). The newly accepted members to the EU face similar problems with waste management – an increasing quantity of waste with decreasing options for its treatment.

Bulgaria is a member of the EU since 1 January 2007. It has harmonized the national environmental legislation in regards to waste management according to the European Union law. However, problems with treating waste have not been solved, but are rather exacerbating. An exemplary case is the waste management crisis in the capital of Bulgaria – Sofia.

Background to the problem

For several years already Sofia has been experiencing a serious problem that resembles a Gordian knot. The waste of the city, its deposition, recycling and reuse seem to be a strenuous task for administrators, politicians, companies, non-governmental organizations and, more importantly, for state and local institutions.

Sofia is the largest city in the country, 1.3 million people¹ live there – approximately 16% of the population of Bulgaria and most of the municipal solid waste is generated there. The only method of waste management in the country is landfilling; none of the other methods – recycling, incineration – is practiced to any significant extent. Moreover, the current trends are for ever increasing quantities of waste generated – Bulgaria generates more waste than some of the Western European countries, where recycling and minimization are implemented (REC 2001).

The current crisis is characterized by the lack of a place where to store the waste from Sofia. The landfill used was built in 1997 and was the first one in the country in full compliance with European standards. An important point regarding Sofia waste management practices is that the waste collection and landfill operation are not performed by the municipality, but are given as concessions to private companies. Due to protests of the local population (the landfill is close to one of the Sofia suburbs) it had to be closed and there was no alternative available. The local people claimed that it caused environmental degradation of the region. However, a survey by the local environmental agency showed that the pollution was actually caused by the concessionaire that operated the landfill incorrectly. Nothing was done by the municipality to solve the issue, except for giving empty promises and on several occasions local people blocked the roads to the landfill as a protest. As a result for several days on several occasions the capital was covered with waste due to lack of waste management facilities and health hazards appeared.

Currently, there is no long-term solution in sight. The administration has tried to find alternative places for a new landfill, but the population in all locations protests vehemently against the landfill being located there. The ombudsman of Bulgaria criticized the Sofia municipality about the lack of administrative planning and waste management strategy. Non-governmental organizations (NGOs) protest against the proposal to build an incinerator and insist on developing a recycling program. Different mayors and political parties still argue which solution is the best, while currently the concessionaire bales the waste and then the bales are transported 250 km away to other cities' landfills. Probably, this is one of the most expensive waste practices in Europe.

¹ Data from the Bulgarian National Statistical Institute <http://www.nsi.bg>

Does it really mean that the Sofia crisis is a dead-end issue? Where does the solution lie and why has no one been able to find it for so many years?

The hypothesis that will be investigated in this paper is that the lack of political will, administrative incompetence for solving the problem and financial interests are the main reasons for the current Sofia waste crisis. Citizens' attitudes towards waste management also contribute to the inability of solving the problem – the not-in-my-backyard problem is prevalent. Moreover, the lack of public participation in decision making regarding Sofia waste and the lack of transparency further exacerbated the negative attitudes of the local communities towards any decision of the municipal administration.

Aims and objectives

The aim of this study is to describe the current status of waste management in Sofia and to determine the possible key reasons that have led to the waste crisis, as well as to propose possible solutions that are in line with the best practices of the European Union waste management.

The objectives are:

- To describe the current state of the Sofia waste crisis and to pinpoint the major events that led to it.
- To identify the most important actors and stakeholders that play major role in the events.
- To determine the possible key reasons for the crisis – political, economic and social.
- To propose possible solutions in the framework of the European Union best waste management practices.

Methodology section

In order to answer the thesis objectives different research methods are used – qualitative research (interviews), desk-based archival research and media exclusives and programs.

Interviews

Interviews are used extensively in order to answer the research objectives. Most of the conclusions reached are backed substantially by desk-based archival research.

The Sofia waste management crisis is a new issue and as a result there is no academic research on it. Most of the materials dealing with the current situation are press publications and municipal programs/action plans. The crisis itself was a result of the actions/inactions of various groups of people and their motives need to be examined. Due to these facts qualitative research (i.e. interviews) was chosen as the primary method. As Kvale (1996) puts it, interviews attempt to “understand the world from the subjects’ point of view”, helping to see the hidden agendas and meaning behind certain actions.

According to the classification presented by Rubin and Rubin (1995) the interviews used for this thesis are semi structured – for events “when researchers want more specific information”, topical – when the purpose is “to learn about particular events or processes” and evaluation interviews – when researchers try to “learn whether new programs, projects, or other types of intentional changes are living up to expectations”.

The interviews with the various actors are mostly a combination of the above-described types. Semi structured interviews are the framework used as this type of interviews is both organized and flexible to changes at the same time. It has an overall theme and a structure to be followed, but it also allows for modifications and further probing on new themes, not initially intended. Topical interviews are used when the sequence of events that led to the crisis is investigated and evaluation interviews are used when discussing the effectiveness of different measures implemented by the municipality, NGOs and the business, related to waste management.

Background preparation is essential for performing a good semi structured interview. For that purpose an interview guide was prepared for each interview, which “indicates the topics and their sequence” (Kvale 1996). The desk-based archival research was used in the preparation of the interview guide as well as in identifying the most important actors and stakeholders in the Sofia crisis.

The research performed identified 17 important stakeholders that can be useful in investigating the crisis. The communication with them led to 10 interviews being actually held in the period of 15 May – 1 June 2007 – a success rate of 56%. This average success rate could pose limitations to the analysis and conclusions. A brief overview of the interviews held is provided below:

Table 1. Interviews held

Name of the interviewee	Date of the interview	Position of the interviewee	Key topics
Atanasova, Milena	17 May 2007	Separation and recycling expert in Ecobulpack	Cooperation with the administration and NGOs; recycling habits in the citizens; the future of recycling
Belcheva, Mihaela	15 May 2007	Participant in Suhodol protests	The reasons for the crisis; communication with the municipality; court cases; public participation
Hlebarov, Ivaylo	18 May 2007	NGO Za Zemiata, specialized in waste	The reasons for the crisis; communication with the municipality; public participation; the future waste treatment plant
Kostova, Valia	30 May 2007	Waste expert in the Green Party	The reasons for the crisis; communication with the municipality; public participation; the future waste treatment plant
Marinov, Ilia	15 May 2007	Director of Bulecopack	Cooperation with the administration and NGOs; recycling habits in the citizens; the future of recycling
Marinov, Marin	1 June 2007	Chairman of citizens' group Trebich	The reasons for the crisis; communication with the municipality; court cases; public participation
Nozharov, Sterio	21 May 2007	Director Investment policy in the Ministry of Environment and Waters	The participation of the government in the process; administrative personnel skills
Radeva, Lorita	31 May 2007	Chairwoman of citizens' group Druzhba	The reasons for the crisis; communication with the municipality; court cases; public participation
Stefanov, Angel	16 May 2007	Ombudsman of Sofia	Cooperation between the administration and NGOs; the future of recycling; the reasons for the crisis; public participation and transparency; the future waste treatment plant
Traikov, Petur	1 June 2007	Environment Director in	Cooperation between the

		Sofia municipality	administration and NGOs; the future of recycling; the reasons for the crisis; public participation and transparency; the future waste treatment plant; future plans of the administration for the waste management in the capital
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The interviews are held with various stakeholders in the process – the municipality, the Ministry of Environment and Waters (MOEW), companies dealing with separate collection and recycling of packaging waste, NGOs and citizens’ groups.

After the actual interview, it was transcribed and analyzed for common themes and ideas. The results of the interview analysis are presented further in the thesis.

Desk-based archival research

Desk-based research involves investigating existing data in order to describe the current situation in Sofia and the major events that led to the crisis. The existing information is also helpful in arriving at possible solutions in light of the EU best practices.

However, the waste management crisis is a very new topic – only in recent years – and there are no scholarly articles about it. This poses a limitation to the analysis of the topic.

The desk-based research focuses on the available waste management programs and strategies of the Sofia municipality that also act as support documents for the qualitative researching. Other documents that are provided by non-municipal sources are also analyzed – such as NGO analyses of different aspects of waste management in the city. Those documents were obtained by extensive Internet and library search, both in English and Bulgarian languages. Some of the documents were provided by the interviewees.

Media information

The waste management crisis is a very fresh and topical issue. That is why many of the issues are discussed by the stakeholders in press conferences and special television programs. As 2006 was the most active year in terms of protests and meetings, the press conferences and TV exclusives on the topic were reviewed for that period.

Overall, the desk-based research and the media information are used as a supportive basis of the conclusions derived from analysis of interviews.

Literature review

Introduction

The following chapter presents an overview of the literature related to the municipal waste management field. Unfortunately, the literature covering the countries in Central and Eastern Europe (CEE) and Bulgaria specifically is extremely limited, so most of the focus is placed on developed countries (e.g. OECD countries). However, as it will be seen later in the chapter, the situation in CEE resembles the OECD position in the 1980s, which makes the available literature more relevant.

As already discussed in the introduction section, the hypothesis investigated in this paper is that the lack of political will, administrative incompetence for solving the problem and financial interests are the main reasons for the current Sofia waste crisis. Citizens' attitudes (NIMBY syndrome) and the lack of public participation in decision making regarding Sofia waste further exacerbated the negative attitudes of the local communities towards any decision of the municipal administration. The literature review section discusses the available information that covers the research hypothesis.

Firstly, the chapter portrays a general overview of municipal waste – definitions, composition, current situation and future trends in order to portray the large picture of waste management. Secondly, it continues with a brief discussion of the various waste treatment options – specifically waste minimization, recycling, incineration and landfilling – to check what options are available for the Sofia municipality to choose from. Then, the discussion is enriched by a review of the influence of the public, the business and the politicians on waste management policies as all those influences are the most important reasons for the waste problem in Sofia. Finally, the current situation in Central and Eastern European countries and specifically Bulgaria is briefly discussed in order to see how they relate to OECD countries.

What is waste?

Municipal waste, the subject of that paper, is defined as “waste from households, as well as other waste which, because of its nature or composition, is similar to waste from households” (EC 1999). It can be classified in several categories, according to the classification provided by REC (2001) in table 2 below:

Table 2. Material classification for MSW

Paper	Newspaper, magazines, junk mail, catalogues and books, office waste paper, cardboard, etc
Glass	Green bottles, amber bottles, clear bottles, other glass, etc
Plastic	Beverage bottles, carrier bags, PE and PP sheets, polystyrene packaging, PVC, rubber, tires, polyurethane mats, etc.
Metal	Ferrous cans, other scrap, aluminum cans and foils, batteries and accumulators, electronic waste, etc.
Organics	Food, other kitchen waste, garden plants and wood, etc.
Textiles	Used clothes/bedding, carpets, etc.

Source: REC 2001.

The percentage composition of waste varies from country to country. Virag (1989) provides a waste composition of the USA in 1984 (in figure 1) and argues that the future waste would have more paper and plastic and less food and yard waste. This trend is supported by Kharbanda and Stallworthy (1990) who state that other developed nations show similar patterns.

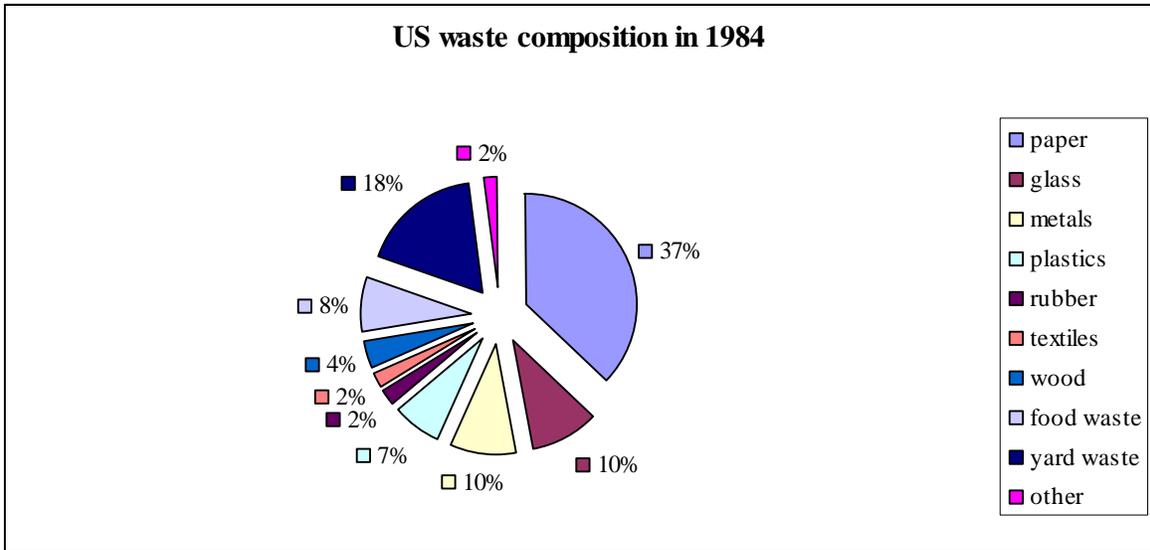


Figure 1. US waste composition
 Source: Virag 1989 (with amendments)

The report of Eurostat (2002) on waste management shows a different pattern for CEE countries and Bulgaria in particular – the major share belongs to organic materials (see figure 2 below).

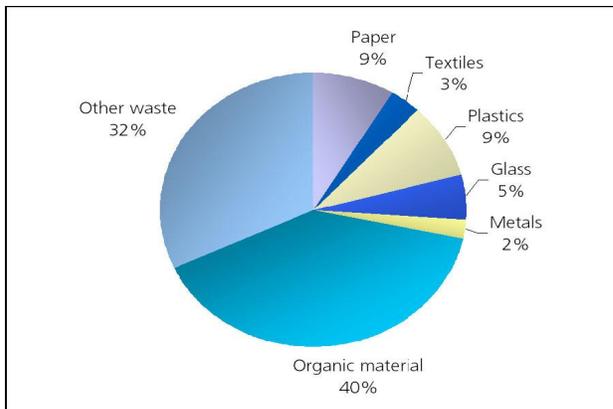


Figure 2. Composition of municipal waste for Bulgaria
 Source: Eurostat 2002

Moreover, the amount of waste generated has largely increased as a result of what Kharbanda and Stallworthy (1990) call – “the proliferation of a disposable economy”. People are embracing convenience and are no longer interested in longevity of items – they want the latest model. This process of consumption leads to an enormous volume of waste,

which is very costly to dispose of. As the authors argue, the costs of disposal are higher than the savings experienced from convenience.

Waste treatment options

The EU waste management hierarchy is portrayed in the framework directive on waste – Directive 2006/12/EC. The hierarchy of waste management options, as shown in the Directive (EC 2006), is as follows (starting from the highest priority one):

- Waste prevention/reduction
- Recycling, re-use or reclamation
- Use of waste as a source of energy.

In any case, municipal solid waste itself and its treatment present us as a society with a variety of environmental risks. Judith Petts (2000) groups them together in two categories – intragenerational and intergenerational, which are summarized in table 3 below.

Table 3. Environmental risks from municipal solid waste

Intragenerational	Intergenerational
Health or environmental risk if waste is fly tipped	Pollution from production of unwanted goods
Resource depletion through waste of virgin materials	Resource depletion
Noise (collection and all management options)	Global warming impact of vehicle emission – transport of waste and also household transport to recycling centers
Litter (collection, recycling and landfilling in particular)	Health impacts from persistent carcinogenic pollutants (all options, landfill and incineration in particular)
Traffic impacts – noise, accidents, air pollution (collection and all management options)	Global warming impact of carbon dioxide from incineration processes
Visual impacts (all management options)	Acidification effects from incineration processes
Dust (all management options except composting)	Global warming impact from methane from landfills
Odor (all management options)	Land degradation and instability – restrictions on future land use from landfill
Health effects (all options, landfill and incineration in particular)	Groundwater pollution (landfill in particular)
Explosion/fire (landfills)	
Water pollution (landfill, composting in particular)	
Ecological impacts (all management options, landfill in particular)	

Source: Petts 2000

Landfilling is the most popular option for waste management in CEE countries and has been the most popular in OECD countries in the 1980s. The EU waste directive (EC 2006) gives landfilling the last place in its waste management hierarchy. White *et al.* (1995) provide a summary of the key considerations for landfilling in table 4 below.

Table 4. Landfilling: key considerations

<ul style="list-style-type: none"> - Can deal with all waste materials - Essentially a waste treatment process with the following outputs: <ul style="list-style-type: none"> - landfill gas - leachate - inert solid waste - The waste treatment process parameters can be optimized, e.g. <ul style="list-style-type: none"> - dry containment - leachate circulation - lining technology - landfill gas and leachate collection - Can be used to reclaim land (or sea) - Should avoid groundwater catchment and extraction areas

Source: White *et al.* 1995 (with amendments)

The proponents of landfills argue that materials degrade naturally in landfills. However, Liptak (1991) states that as materials get compacted and dried in landfills they practically do not degrade but become “mummified”.

In the 1980s OECD countries experienced a severe waste management crisis. The existing landfills were reaching their maximum capacity and the public opposed any new landfills. Moreover, the quantity of waste generated by households increased tremendously. As a result of those issues, incineration was viewed as the new solution. The process involves burning waste with or without energy generation. During burning air pollutants are emitted, such as particulates, sulfur dioxide, nitrogen oxides, dioxins (which are carcinogenic) and heavy metals (which are toxic). Marro (1989) argues that investing in incineration is “trading one kind of pollution for another while burdening taxpayers with enormous costs”. On the other hand, Liptak (1991) compares the public opposition to incineration to the opposition to nuclear power plants and argues that the NIMBY (not in

my backyard) syndrome could lead to unreasonable prevention of incineration. His argument is that such technology is developed so that incineration has no dangerous consequences for human health and the environment. The pro-incineration lobby provides several arguments in favor of incineration, as summarized by Gandy (1994):

- Incineration requires no major changes in the current waste management practices of waste collection.
- The incinerator is built by private companies which lessens the taxpayers' burden.
- There is less need for landfilling as the volume of waste is decreased significantly (by approximately 90%).
- The energy recovered can serve to cover the costs incurred by incineration.
- Incineration income rises over time, while landfill costs increase.

A study on the externalities of landfilling and incineration performed on behalf of the European Commission (DG Env 2000) concluded that “there is **no easy and straightforward answer as to whether incineration or landfill disposal is preferable** from the point of view of external effects”. If a choice between the two options has to be made, then the study (DG Env 2000) recommends that regulators should consider the most important effects of the two technologies – air pollutants for incineration and “disamenity and global warming” for landfilling. Currently, the EU is actively promoting among the member states different methods for waste treatment, rather than incineration and landfilling.

Recycling is another method of waste treatment, which focuses on reuse of materials. However, as Backman and Lindhqvist (1992) point, it should not be “considered a goal in itself, but only a means of reaching a paramount environmental goal”. Policy makers should not neglect waste reduction and focus only on recycling, as it has its limits.

Fessenden (1989) defends the idea that recycling is more environmentally friendly and more cost-efficient than landfilling and incineration. Turner (1992) performs an economic analysis of recycling versus disposal and concludes that recycling should be extended. On the other hand, Gandy (1994) states that “comprehensive recycling programmes ... are more expensive than routine waste collection and disposal by landfill and incineration”. However, recycling becomes a financially viable option once the true

social costs of landfilling are included in the analysis. Gandy (1994) summarizes the benefits of recycling as follows:

- Recycling helps conservation of resources and the move towards sustainable society.
- It reduces energy use, pollution and greenhouse emissions.
- Participation in recycling schemes provides environmental education to the public.
- Recycling reduces waste disposal costs, especially when the externalities of waste generation and treatment are internalized.
- Recycling has a job creation potential, especially in poor urban areas.

A study performed on behalf of the European Commission examines the economic valuation of various management options for biodegradable waste (ECOTEC 1992). As mentioned earlier, this type of waste comprises a large portion of all municipal waste. The most important point in the study is that “there is little to suggest that a policy mandating source separation of biodegradable municipal waste would be damaging if imposed in the EU” (ECOTEC 1992). What is more important to the new members of the EU is the fact that implementing source separation would be less capital and money intensive than the other options like incineration. Furthermore, this study emphasizes three other points which make separation a preferable option: first of all, separation makes it feasible to implement fees per waste generated and can stimulate environmentally friendly behavior in citizens. Secondly, it is a preferred choice because landfills and incineration face serious opposition from various community groups; and third – separation and composting of biodegradable waste can be linked to agricultural and rural development programs.

Despite the variety of waste treatment options and the controversies around them, all authors agree that waste minimization is the best option available. Waste minimization encompasses both prevention and control, according to Kharbanda and Stallworthy (1990). White *et al.* (1995) argue that “source reduction is a necessary precursor to effective waste management”. Fessenden (1989) supports this idea and argues that waste minimization is the notion that has been “so widely praised and so much ignored”. All current waste management strategies have been focused on the final treatment of waste, as if waste is independent from its source. However, Backman and Lindhqvist (1992) argue that policies

should target the source of waste and preventative measures for waste reduction should be given top priority.

Socio-political issues

As a result of the seriousness of the waste problem, it has become a highly political issue, instead of “remaining the purely scientific and technical issue that it ought to be” (Kharbanda and Stallworthy 1990).

Some of the greatest obstacles met by waste managers are, on one hand, public opposition to landfills and incineration and, on the other hand, lack of public participation in recycling schemes. White *et al.* (1995) argue that in OECD countries in the 1980s the public opposed incinerations due to danger of emissions, but with more stringent environmental standards being implemented the public opposition switched “to the perceived incompatibility of incineration with materials recycling”. This is due to the fact that the recycled materials are the ones that have high calorific value. However, the authors argue that the opposition is unnecessary, as there are ways to match incinerators capacity to the waste generated in a particular area. On the other hand, Bessent and Bunch (1989) argue that investors want guarantees for the flow of waste to incinerators before they provide the financing and those guarantees are detrimental to recycling because all waste has to be channeled for incineration. This view is supported by Liptak (1991) who states that “incineration and recycling do not complement each other” and this has resulted in contracts that guarantee all municipal waste to go for incineration in several US cities. Marro (1989) argues that instead of giving subsidies to incinerators and requiring utilities to buy the energy they produce, the government should obtain a more hands-on approach and invest more in environmentally benign schemes such as recycling and waste minimization.

Regarding participation in recycling schemes there is a need to financially motivate people to take part. Liptak (1991) states that “social behavior is most effectively changed through the pocketbook”. Charging people for the amount of waste they send for landfilling or incineration is one way to stimulate them to recycle. Katzev *et al.* (1993) state that recycling works effectively in middle and high income and single housing areas. However, McQuaid and Murdoch (1996) provide evidence for the effectiveness of recycling policies

in low income and multi-storey housing. Their research questions the finding of Katzev *et al.* (1993). The authors conclude that well-designed recycling programs prove to be successful in the poorer parts of a city as well as in the more well-off parts.

Waste management is a local problem usually – municipalities have to design a system and to manage waste. Designing an efficient waste management system is the key to sustainable waste management practices. White *et al.* (1995) discuss the key characteristics of an effective system – instead of traditional end-of-pipe controls they propose an integrated waste management system. It focuses on all types and sources of waste and is market-oriented, flexible and on a large scale. Instead of adjusting an old system by different “patches” (e.g. a recycling program here and there), a whole new integrated system is needed. Table 5 below summarizes their view on how to design an effective integrated waste management system.

Table 5. Integrated waste management system

Designing an effective solid waste management system	
1. Strive for both of the following:	
Environmental sustainability: reduce environment impact	
Economic sustainability: drive costs out	
2. To achieve these the system should be:	
Integrated:	in waste materials in sources of waste in treatment methods
Market oriented:	materials and energy have end uses
Flexible:	for constant improvement
3. Take care to:	
Define clear objectives	
Design a total system against those objectives	
Operate on a large enough scale	
4. Never stop looking for improvement in environmental impacts and costs. There is no perfect system.	

Source: White *et al.* 1995 (with amendments)

Turner (1992) supports the integrated waste management idea and states that a complete system should not focus on one treatment method, but should encompass waste

reduction, recycling and landfilling. This is further emphasized by Gray (1997) who states that “the future emphasis will be on integrated and sustainable waste management which will involve every aspect from minimization and product design, through waste collection, storage and transportation, to reuse, recycling, treatment and disposal methods”.

Fessenden (1989) adds another point necessary for an effective waste management system – public cooperation. Backman and Lindhqvist (1992) argue that “today’s environmental problems, to a high degree, are caused by attitudes rather than by technical problems”. What is necessary is public education – “enlisting the public in recycling and source reduction, including voters in the process that arrives at a solution” (Fessenden 1989). All of those approaches for stimulating public participation are based on the assumption that recycling is morally good and disciplinary measures are required to stimulate people to comply with regulations.

Hawkins (2003), however, proposes a different way of looking at waste – an alternative “to the power and urgency of campaigns based on guilt and mastery”. Instead of accepting waste treatment as a moral duty the author proposes that campaigns and programs develop a sense of enjoyment in waste treatment, which would fulfill our self. As Hawkins (2003) puts it, “in enjoying waste, in deriving pleasure from the careful management of loss and disposal, we become aware of the presence of the sacred in the most mundane of actions”. In such a way people develop sensibility towards waste and become careful with it, without the nagging feeling of guilt.

Roberts (1992) develops the idea of public cooperation further and states that authorities and the businesses involved need to build public confidence and this process would take a long time. Moreover, full disclosure of information is necessary, together with the involvement of the public from the onset of the project.

The issue of public participation in the waste management process

As the problems of our societies become more complicated and the interested parties ever more diverse, public participation becomes a tool to enhance “institutional legitimacy and the ‘bottom-up’ approach to decision making, and allows those with a weak voice to exert influence on outcomes” (Petts 2001). Petts (2001) argues that active public

participation is sometimes at odds with the way of thinking of officials and administrators, who were taught to see themselves as not connected to their constituencies. And this is where conflicts may appear.

Petts (2001) also provides for various degrees of public participation, depending on the amount of involvement – information provision, information collection and feedback, consultation and involvement. The author also provides a list of criteria against which a public participation scheme can be evaluated for effectiveness. The criteria evaluate whether the process:

- “(1) ensures that the participants are representative of the full range of people potentially affected and that barriers which may bias representation are minimized;
- (2) allows participants to contribute to the agenda and agree and influence the procedures and moderation method;
- (3) enables participants to engage in dialogue, and promote mutual understanding of values and concerns;
- (4) ensures that dissent and differences are engaged and understood;
- (5) ensures that ‘experts’ are challenged and that participants have access to the information and knowledge to enable them to do this critically;
- (6) reduces misunderstanding and ensures that the authenticity of claims is discussed and examined;
- (7) makes a difference to participants, e.g. allows for development of ideas, learning and new ways of looking at a problem;
- (8) enables consensus about recommendations and/or preferred decisions to be achieved;
- (9) makes a difference to decisions and provides outcomes which are of public benefit;
- (10) ensures that the process is transparent and open to those not directly involved but potentially affected” (Petts 2001).

The NIMBY syndrome is often referred to when dealing with problems with waste management. When the time comes for a new landfill or incinerator to be built the NIMBY issue comes to surface. Local communities protest against the location of a particular facility and many politicians put the blame for that on “self-interest and/or irrational fears” (Wolsink 1994). However, Petts (1995) provides more details on what exactly the

communities' opposition is based on – people pose questions related to “the *need* for the facility; the relative role of treatment and disposal versus minimization and recycling; the criteria used to choose a site; and the ability of the operator and authorities to manage and monitor the operation so as to control environmental risks”. If the public has been involved from the beginning of the decision making process those questions would not have been unanswered and a solution could have been reached.

Shemtov (2003) builds on that and investigates NIMBY movements organizations and their evolution. He concludes that local NIMBY organization extend their span of interest and are in reality not short-lived, if there are no external political networks that promote “their own rhetorical and resource agendas” (Shemtov 2003). The author concludes that NIMBY organizations are “obdurate and necessary conduit for political and democratic participation”. This thesis would examine what the concerns of the local communities in Sofia were, what their involvement in the decision making process was and would also investigate the socio-economic and political reasons for the crisis.

Waste in CEE

There is limited information available related to waste management practices in the Central and Eastern European countries. A report of the Regional Environmental Center for CEE (REC 2001) points out that information provided by CEE governments is unreliable in most cases, with Bulgaria used as an example of such doubtful official statistics. This point is further emphasized by a Eurostat report which states that there is a “lack of sufficient waste bookkeeping” and poor “data quality” (Eurostat 2002).

The report concludes that CEE countries on average generate 370kg per inhabitant per year, while OECD average was 500kg per inhabitant per year. However, as a result of the economic changes after 1989 and the increase in income the amount of municipal solid waste is on the rise. Still, the preferred treatment method is landfilling because it is the cheapest method. Unless there are some government regulations, market mechanisms will push waste to landfills, “thereby acting in direct opposition to the official community strategy” (REC 2001).

The report notices that despite the fact that the CEE countries have developed national waste management strategies, they all have weak spots, most of them related to the areas of public participation and education and in research and development of technologies, policies and markets. The reports concludes that the situation in CEE countries in respect to waste management resembles the one in OECD countries in the 1980s, but CEE countries are not prepared to comply with the EU waste management directive.

Bulgaria prepares a national program for waste management in line with the requirements of the European Union. Currently, the Ministry of Environment and Waters has not yet released the program for the period 2007 – 2011 as it is still under review. The last available program is the one covering the period 2002 – 2006. The program (MOEW 2002) summarized the available information for municipal waste management in Bulgaria which is similar to the one presented in the Eurostat report (2002). The program (MOEW 2002) emphasizes that the information regarding MSW is uncertain due to lack of control of the data provided by the waste management companies to the municipalities and the lack of measurement equipment at the landfills.

Summary

Municipal solid waste is a very topical subject in the political agenda because the amount of waste generated by households constantly increases and the available land for its deposition decreases. The public opposes any new landfills and incinerators. Despite their minor disagreements, all authors agree that waste minimization and reduction are the best ways to go forward, because the problem has to be tackled at the source. However, administrators need to stimulate the public by various incentives to participate in recycling schemes and to minimize waste. Public participation in decision making and cooperation between the communities, the government, the municipality and the businesses is essential for effective and efficient solution of waste management problems.

The municipal waste situation in Bulgaria resembles the situation in OECD countries in the 1980s. During the crisis of the 1980s the EU accepted the EU Waste Management directive, which is now implemented in the older EU member states. However, despite the

fact that the Directive was transposed into the national legislation, it is not working as intended. The Sofia waste crisis is an exemplary case of the current predicament. Unfortunately, there is no literature on the reasons of the crisis and the possible solutions. This thesis is intended to fill that gap. It aims at revealing the hidden causes of the mishandling of waste in the capital and at showing how the problems can be overcome. Hopefully, the results of the research can be used by policy and decision-makers in avoiding the mistakes that lead to the Sofia crisis and in designing waste management policies that fully correspond to the true spirit of the EU waste management directive.

Chronology of events

Before we begin any investigation of the causes of the events a thorough understanding of the chronology of events is needed. It would show how some events caused others and what provoked certain actions.

The beginning of the crisis was set in October 1984 when a Ministerial decree established the location of a new landfill in Sofia – near the Sofia district of Suhodol. The Suhodol landfill was designed to accept only municipal solid waste and the deposition of construction, hazardous and electronic waste was forbidden. The first phase of the landfill was filled up and closed in 1996.

The second phase of the Suhodol landfill was opened in January 1997. This was the first landfill in Bulgaria, built in full compliance with the European standards for landfill construction and environmental protection. In 2000 the mayor of Sofia Stefan Sofianski declared that the capacity of the landfill is four more years and in two years time the construction of a new incinerator would begin (which did not happen).

2001-2002

The first protests started in December 2001 – the people living in the districts around the landfill blocked the road to it and Sofia was covered with waste for the first time. The protestors complained about the air and soil pollution and the increased respiratory diseases among the children in the area. They also demanded that the trucks carrying the waste take a round-about way to the landfill, not through the centre of the district, and insisted on the subsequent closure of the landfill.

At this stage the Ministry of Environment and Waters concluded that the landfill was safe for the environment and according to the Regional Inspectorate of Environment and Waters – Sofia (RIEW) the pollution was caused by the concessionaires (BNT 2006).

In September 2002 the people from Suhodol blocked the road to the landfill again as a response to the idea of the Sofia municipality to build a cell for hazardous waste in the

landfill. The Supreme Administrative Court (SAC) of Bulgaria disaffirmed the decision and the mayor Sofianski pulled back and promised that by 2004 the landfill would be closed.

From this promise on the crisis started to unfold fast and the major events took place in 2005 and 2006.

2005

As the landfill was not closed by the end of 2004 and there was a decision by the municipality to extend its life by one more year, the citizens of Suhodol protested again in January 2005, demanding the immediate closure of the landfill. After several failed negotiations the Sofia City Council (SCC) decided to close the landfill as of 30 June 2005 and in the meantime to search for solutions of the problem.

In this time of constant tension the municipality promoted the idea that baling the waste and temporary storing it would “buy the necessary time to find a permanent solution” (BNT 2006). In May 2005 the municipality selected three companies that would bale the waste. Each company would be on a separate location and would be responsible for baling 350 tons of waste per day. The capacity of the sites to store the bales was estimated to be 2-3 years.

Although this protest ended, in June 2005 the deputy mayor announced that the municipality would not be able to find an alternative site in time and the Suhodol landfill had to be used longer. The citizens again declared their firm position to protest if the municipality would break its promise.

In the meantime the mayor Sofianski took a leave of absence in order to lead his party for the parliamentary elections in June 2005 and a deputy mayor was appointed – Minko Gerdjikov. In July 2005, as the landfill was not closed as promised, the citizens of Suhodol again blocked the road and Sofia was once again covered in waste. The citizens of the districts where the temporary storage of the baled waste was planned protested as well. As a result, on 4 July 2005 the deputy mayor announced a crisis situation in Sofia and requested the involvement of the government in the problem. Four days later police forces forced the blockade and cleared the road for the waste transportation trucks.

The president of the country met with the protesters and declared his support for a solution to the problem. The citizens of Suhodol continued the protests without blocking the road and finally, as of 3 October 2005 the landfill was closed officially. As a temporary solution for the waste crisis the baling of waste began in three locations – Iskur, Trebich and Kremikovtzi. However, these sites turned out to be too small for the capital's waste and the search for waste storage places continued. In November 2005 the government declared that the mines of Chukurovo would be the new storage place which provoked protests from the nearby villages. However, with a Supreme Administrative Court decision from April 2006 this government decision was declared void.

2006

Baling, however, was and still is only a temporary solution and the municipality constantly tries to find ways of opening Suhodol again. In March 2006 it declared its intention to open the landfill again and the tension escalated once more. In September 2006 the new mayor of Sofia Boiko Borisov promised the citizens of Suhodol that in exchange of temporary opening of the landfill and the construction of an incinerator there, the municipality would invest heavily in infrastructure projects in the district. The people of Suhodol refused the offer.

The municipality had started opening the offers for the construction of permanent waste treatment facility in March 2006. There is no final selection as of June 2007.

In May 2006 the mayor Borisov and the political parties in the Sofia City Council signed a memorandum for common actions in order to solve the crisis. However, the mayor and the minister of the environment and waters exchanged accusations of inaction in determining the location for the new landfill.

In August 2006 the citizens living around one of the sites for baling – Iskur – started protests against the smell coming from the location, demanding the removal of the bales not later than September 2006. The capacity of the site itself was exhausted in October 2006.

In October 2006 the government proposed the baled waste to be deposited in the landfills of two other municipalities – Plovdiv and Karlovo, which in exchange for that would receive BGN 57 million (EUR 28.5 million). The offer was accepted (with a

decision of SCC 786/23.10.2006) and since the beginning of November 2006 the bales are being transported to the landfills there (250km away from the capital approximately).

Also, at the end of October 2006 experts from the European Investment Bank (the Bank) and the Jaspers program arrived in Sofia to investigate the potential sites for the new landfill and incinerator. The report of the Bank recommends stopping the baling and considering using the Suhodol landfill until a final solution is found.

2007

At the end of January 2007 the mayor Borisov met with the experts from the Bank again which recommend the construction of the incineration with private ownership (BNT 2006). They also approved a site for the future waste treatment facility – Han Bogrov.

In February 2007 the mayor had a meeting with the citizens of another district – Gorni Bogrov – to convince them to accept the temporary storage site for the waste. However, no compromise was reached at that meeting.

In April 2007 the three concessions of the Sofia waste management were sold to Equest Investments Balkans (EIB or Equest) for EUR 45 million. Equest obtained a full monopoly over managing Sofia waste.

Currently, three potential sites for the future waste treatment facility are discussed – Han Bogrov, Kremikovtzi and Kubratovo. A decision is still pending.

In June 2007 the municipality received a certificate for a first-class investor from the Bulgarian Investment Agency. This would shorten the time for performing all necessary procedures for the waste treatment facility by 30%. The total value of the project is BGN 257 million (EUR 128 million) and the plant is supposed to start operating in 2011. Its capacity would be 1,000 tons of waste per day.

In brief, the situation as of now is that – the waste is collected by one company and baled by three others. The bales are transported to two landfills and deposited there – 250 km away. There are plans for a waste treatment facility but, however, there is no location for a new landfill near Sofia.

Current situation

After reviewing the chronology of events a brief overview of the current situation regarding waste management is needed. The current status would identify many problems facing the city and its administration in solving the waste crisis.

Legal framework

The Ministry of Environment and Waters is the competent authority responsible for the development and implementation of the national waste management policy, including drafting and enforcement of the legislation, strategies, programs, international projects, as well as regulation of the activities in the public and private sectors. The MOEW performs some of these activities by the Executive Environmental Agency (EEA) and a network of 15 Regional Inspectorates of Environment and Waters (RIEW) that are specialized control bodies of the Ministry.

MOEW develops a national waste management program, which the Council of Ministers has to approve. The Ministry is also responsible for issuing guidelines for the development, scope and contents of municipal and corporate waste management programs.

The Regional Inspectorates of Environment and Waters control the implementation of the waste management legislation. The RIEWs control the implementation of the waste management programs adopted by the municipal councils for the territory of the respective municipality.

The mayors of each municipality are responsible for the development and implementation of municipal waste management programs, which have to be for a period of 3 years or more. During the process of developing waste management programs participation of the public and environmental organizations is encouraged. The mayors provide public access to the municipal program. The implementation of all programs is monitored on a yearly basis and an execution report is submitted to the authority that approves the program (i.e. the Council of Ministers or the municipal council).

The current situation in Sofia

Sofia is the capital of Bulgaria and the largest city in the country – 1.238 million people live there according to the latest (2006) survey of the National Statistical Institute², which represents 16% of the total population. As in the rest of the country, the only method of waste treatment was landfilling (in the Suhodol landfill) until recently. The collection and transportation of waste were given as three concessions to various companies, now being consolidated into one owner of the concessions – Equest Investments Balkans. As a result of the waste crisis and the closure of the landfill, currently the waste is being baled and transported to two other landfills – both approximately 250km away from Sofia.

There are two main documents trying to provide some direction and strategy for the municipal administration – the municipal program for waste management, approved with a decision 455/15.06.2006 of the Sofia City Council and a strategy for long-term waste management, commissioned by the Sofia municipality and approved with a decision 208/22.3.2007. However, none of those documents can give a true picture of the current status of waste generation, collection, etc. in Sofia due to lack of information. As the program states (SCC 2006a) one of the major obstacles to designing an integrated waste management system is the lack of a truthful and complete database regarding quantities, qualities and structure of waste and generation, collection, transportation and treatment methods.

Despite the crisis situation and the urgent necessity for solutions, the strategy (SCG 2007) points out that in the past years there has been essentially no systematic work done in respect to collecting information regarding waste and the commissioned research for potential locations was not done with a vision for the future, but in a rather patch-work manner.

Another problem faced by the municipality is the lack of a system which monitors the performance of the concessionaires and, thus, does not allow for correct and on-time decision making. Moreover, the above mentioned gaps in information collection prevent

² National Statistical Institute www.nsi.bg

the undertaking of sound economic analysis of the available options and again does not allow for proper decision making.

The conclusion made in the strategy (SCG 2007) is that the available information is not sufficient for the preparation of an integrated waste management program. As a result, most of the information to be presented below is an extrapolation of the results of a 2000 survey, which makes the data very far-stretched.

The total amount of waste generated is measured only at its deposition in the Suhodol landfill and from September 2005 – by the amount of bales prepared. Table 6 below summarized the available information:

Table 6. Amount of municipal waste generated in Sofia

Year	2001	2002	2003	2004	2005	2006
Total MSW generated in tons	336,000	352,377	364,444	361,702	362,685	320,835

Data source: SCC 2006a; SCG 2007

The trend shows a constant increase, which is expected to remain such due to the improvements in income and the increase in the capital's population.

The morphological content of the municipal waste is even harder to establish. The data is based on unsystematic surveys and then extrapolated for the whole city in 2000, 2001 and 2006 and is summarized in table 7 below.

Table 7. Morphological content of the MSW in Sofia.

Type of waste	% share of total in 2000	% share of total in 2001	% share of total in 2006
Paper and cardboard	7.9	7.9	21.6
Plastics	6.8	6.8	22.9
Glass	12	12	9.5
Metals	1.5	1.5	2.6
Textile	1.5	1.5	4.4
Wood	1	1	2.1
Rubber and leather	1	1	0.9
Food waste	35	35	24.3
Yard waste	-	-	8.6
Small organic waste	-	24	-
Sand and soil	4.6	4.6	1.4
Unidentified	-	4.7	1.7
Other, predominantly organic	28.7	-	-
Total	100%	100%	100%

Data source: SCC 2006a; SCG 2007

As it can be seen from the table above, even the methodology used for these different surveys is not the same and the categories are different. As a result, not a very reliable analysis can be made. Overall, the morphological content of the Sofia waste is similar to the one shown by the Eurostat report in 2002 for Bulgaria, as discussed in the literature review section.

The only recycling scheme that is on some scale in Sofia involves packaging waste. There are four organizations – Ekopack, Bulecopack, Ecobulpack and Repack – which are responsible for the organization of the recycling facilities. As of today, however, the scheme functions on a very small scale – the total collected packaging material for Sofia for 2005 is 280 tons (SCC 2006a), which is completely negligible. There are recycling facilities that are separate from those organizations, but there is no information whatsoever regarding the quantities of materials collected.

The financing of the waste management activities of the municipality is provided by the annual waste fee, collected from property owners in the city. The waste fee is calculated as a percentage of the tax value of the property, which is updated yearly. The waste fee collected by the municipality is earmarked for waste management activities and cannot be allocated to other projects. As a result of the increase in property values in recent years, the waste fee is constantly rising and in 2006 it was BGN 97 million (EUR 48.5 million), which is 35% of the waste fees in the country (SCG 2007). However, not only the fee is rising, but also the costs of waste management are also increasing. The major reason for the recent increase in the costs is the baling of waste – as the strategy states (SCG 2007) of the total BGN 83 million (EUR 41.5 million) spent, BGN 33 million (EUR 16.5 million) are as a result of the baling. The conclusion derived from this, supported in the strategy (SCG 2007) is that despite the increasing income and costs there is no permanent solution for the waste management problems of the capital city.

The SWOT (strengths, weaknesses, opportunities and threats) analysis provided below in table 8 summarizes the current situation in the Sofia municipality regarding waste management.

Table 8. SWOT analysis of the waste management situation in Sofia

Strengths	Opportunities
<ul style="list-style-type: none"> ○ Increased income of the citizens guarantees high waste fee ○ High recoverability of waste fees ○ Enough waste collection bins and equipment ○ Separate collection of waste has already started ○ Serious investor interest for the construction of waste treatment facility ○ Advanced procedures for determination of locations for the waste treatment facility 	<ul style="list-style-type: none"> ○ The government is interested to fulfill the national waste management goals with the least costs, thus helping Sofia municipality as the biggest waste producer ○ The process of decentralization of powers is deepening ○ Opportunity to use EU funds ○ Private investors are willing to contract public-private partnerships ○ Can utilize the EU experience on designing integrated waste management programs ○ The organizations for utilization of packaging waste are willing to cooperate with Sofia municipality
Weaknesses	Threats
<ul style="list-style-type: none"> ○ Lack of information system about waste quantities, contents and other parameters ○ Serious NIMBY syndrome ○ The citizens of Sofia have no habits of separate collection of waste ○ Waste baling ○ Lack of a vision for the development of a long-term integrated waste management system ○ Insufficient administrative capacity for waste management ○ Lack of proper locations for waste management facilities ○ The suggested technological solutions for solving the crisis are not as a result of serious research and analysis 	<ul style="list-style-type: none"> ○ The misunderstanding between the municipality and the concessionaire is deepening ○ Lack of cooperation between the municipality and the relevant governmental institutions ○ Increasing NIMBY attitudes ○ Conflict between the temporary solution for the crisis and the long-term view for waste management

Source: SCG 2007(with amendments)

Parties and stakeholders in the process

The table below provides a summary of the key parties and stakeholders in the waste management process in Sofia.

Table 9. Key parties and stakeholders in the process

Party/ stakeholder	Nature	Interest	Persons involved
Sofia municipality	The local government of Sofia	Interested in building a landfill or opening the existing one; also plans to build a waste treatment facility	The mayors during the period – Mr. Stefan Sofianski and Mr. Boiko Borisov
Sofia City Council	The local parliament of Sofia	Interested in building a landfill or opening the existing one; also plans to build a waste treatment facility	Various city councilors
MOEW	The Ministry of Environment and Waters	To find a location for Sofia waste	The minister Djevdet Chakarov
IC Suhodol	Initiative committee of the local residents of the Suhodol district, where the landfill is located	To close permanently the landfill	Various people from the committee
IC Trebich	Initiative committee of the local residents of the Trebich district, where one of the baling sites is located	To stop baling there	Mr. Marin Marinov
IC Druzhiba	Initiative committee of the local residents of the Druzhiba district where one of the baling sites is located	To remove the garbage bales from the district and to stop baling	Mrs. Lorita Radeva
IC Kremikovtzi	Initiative committee of the local residents of the Kremikovtzi district where one of the baling sites is located	To remove the garbage bales from the district and to stop baling	Various representatives
NGO Za Zemiata	Non-governmental organization which focuses on waste activities	To stop baling and the construction of the plant, to initiate a full morphological analysis of Sofia waste; to implement “zero-waste” strategy	Mr. Ivaylo Hlebarov
Volf 96	A private company which was dealing with waste management in Sofia until April 2007	To be profitable	Mr. Rumen Gaitanski
DITZ	A private company which was	To be profitable	Mr. Rumen

	dealing with waste management in Sofia until April 2007		Gaitanski
Chistota Sofia	A municipal company which was dealing with waste management in Sofia until April 2007	To be profitable	The municipality (controlled by Mr. Rumen Gaitanski)
Equest Investments Balkans	Investment fund, the new owner (since April 2007) of the waste concessions of Sofia	To be profitable and to become the operator of the future waste treatment facility	Mr. Georgi Krumov

Analysis and discussion of the reasons for the Sofia waste management crisis

The reasons for the crisis are grouped in several categories – economic, political and administrative. A further point discussed is the lack of cooperation between the administration and the public as one of the major reasons for the current dead-end situation.

Economic reasons

A major reason for the start of the crisis and its prolonged existence is the economic interests of many of the involved stakeholders. Money is cited by many participants in the process as the major reason, as it would be seen later on in the chapter.

The concessions of the waste management

The roots of the crisis are set further away than the start of the protests in 2005. For many, the problems of waste management in Sofia have started with the granting of the waste concessions to various private companies. As mentioned before, the waste management is organized in districts and three companies – Chistota Sofia, Volf 96 and DITZ – handled the districts' waste until April 2007, when the three concessions were sold to Equest Investments Balkans, an investment fund. However, those concessions created a lot of tension among the administration, the public and the concessionaries and their very existence sent a lot of signals as to what went wrong in the waste management system.

There are two very significant reports on the concessions – one is prepared by the Access Foundation Sofia (a Bulgarian NGO focusing on revealing corruption cases) in 2003 and the other – by the Bulgarian National Audit Office (BNAO) in 2004. Both of them investigate the concessions – the Access report from a legal point of view and the Audit Office report – from a financial compliance point of view. However, both reports have similar findings and, subsequently, conclusions.

According to the experts from the Access Foundation (2003) there is circumstantial evidence that there were arrangements outside the scope of the official contracts and reports, which led to suspicion of corruption. The report concludes that the situation with the concessions is a paradox – the municipal councilors take decisions together to the detriment of municipal interests.

According to Access (2003), the very nature of concessions makes them attractive for corruption – the conditions are not publicly available, the quantity and quality of services are hard to measure, part of the services are connected with fast changing weather conditions (e.g. street cleaning as part of the concessions), which impedes control. Moreover, the citizens are unable to influence the procedure, except post-factum with complaints.

What is the reasoning of Access Foundation to make such conclusions? The three concessions were given in three separate contracts and procedures were breached in the three cases.

The first procedure for giving concession for four districts was announced in a Sofia City Council decision in December 1996. The Bulgarian law on concessions requires that there are legal, economic, social and environmental analyses of the concession to justify its necessity. However, the decision was taken only on the basis of a brief report of the councilor Krasimir Arsov, who was the director of Chistota Sofia AD as well. The report did not provide any analyses of the types mentioned above. Four major points were missing from the report: 1) what was the basis of the decision; 2) what was the economic reasoning of the concession; 3) what and how would be achieved through the concession; 4) how would the municipal interests be protected. This point is emphasized in the report of the National Audit Office (2004) as well.

In November 1997 the winner was announced – Volf 96 AD. Although there were five companies that were participating in the competition there was no reasoning provided by the commission why Volf 96 was the chosen winner. Moreover, the choice was made without having a clear set of criteria to base the decision upon. Several comparisons performed by Access (2003) of the two last remaining bidders – Volf 96 and BKS Lulin – show that the choice made was not based on objective criteria. For example, an important criterion was the experience in waste management and the commission's only conclusion

was that both companies had experience in this field. However, BKS Lulin was the company which until 1996 was the only one allowed by law to perform waste management activities. Volf 96, on the other hand, was registered as a company in 1996 and it seemed somewhat hard to explain how it managed to accumulate comparable experience only for the several months of its existence. Regarding the pricing of a weekly waste collection and transportation BKS Lulin provided a better price than Volf 96. In terms of available waste collection and transportation equipment and waste collection bins BKS Lulin already owned them, while Volf 96 only declared its intention to purchase what was necessary. The commission emphasizes the fact that BKS Lulin had more outdated equipment which would increase the expenses for maintenance and would raise the costs of the service. However, as Access (2003) emphasized, nowhere in the documents the price of the concession was mentioned, although it should have been the leading criterion.

BNAO (2004) stated that the competition documents did not show the limits of the municipal budget for waste management. That allowed for disconnecting quality of service and the financial abilities of the municipality.

In March 1998 the City Council announced a procedure for concessions for the rest of Sofia districts. The decision was based on a suggestion of the councilor Krasimir Arsov, whose company Chistota Sofia participated in the competition. The Audit office (2004) found out that the analysis performed in the report dated 93-00-78/27.02.1998 of councilor Krasimir Arsov did not comply with the Concession law. The brief reports of councilor Krasimir Arsov (№ 93-00-304/28.11.1996 and № 93-00-78/27.02.1998) lacked the justification of what would be achieved by the concessions and a preliminary estimate of risks and benefits of the concessions. The offers were opened in July 1999 and only after opening them the commission concluded that they were incomplete and determined the criteria for evaluating the offers. According to Access (2003) this was both absurd and illegal – the criteria for selection of a winner cannot be determined during the competition, but before that.

With protocol 3/16.07.1999 the commission picked two winners – Chistota Sofia AD and DITZ AD. Access (2003) points out that as in the previous competition the selection did not appear to be objective – DITZ AD received the highest mark for professional

experience even though it was registered in April 1999. How they managed to accumulate experience for three months was unclear from the documents.

But irregularities can be found not only in the procedures for the competitions but also in the preparation and signing of the contracts for concessions, as both reports – Access (2003) and BNAO (2004) – indicate.

The National Audit Office (2004) points out that there was no system of internal control in the municipality to monitor the concession contracts and no control on the execution of the investment programs of the concessionaires. Moreover, the contracts with Volf 96 and DITZ contained a clause allowing for contract termination in cases of systematic low quality work. However, no definition of “systematic” and “low quality” was provided and, furthermore, there was no such clause in the contract with Chistota Sofia. Also, the contracts did not provide for penalties for non-execution or late execution of the contracted work.

Access (2003) provides the information that the total price of the three concessions was BGN 70 million. However, Sofia municipality could not provide for the funds at the time of signing, so immediately after the contracts were signed, annexes to them were also signed (in the same day) which stated that the contracted price would be reached in 2003. However, as it can be seen from table 10 below, this price was unrealistic as the waste fee collected was much lower. It reached the BGN 70 million envisioned in the contracts only in 2005.

Table 10. Waste fee collected

Year	Waste fee, BGN
2001	36,812,191
2002	51,265,985
2003	61,932,384
2004	69,411,864
2005	75,000,000
2006	97,000,000

Source: SCC 2006a

Access (2003) concludes that the prices contracted were unachievable and that was why they were immediately corrected in the annexes at the expense of the quality and amount of services to be provided by the concessionaires.

As it can be seen from the table above, the waste fee collected increased year on year constantly, but so did the expenses and the amounts utilized by the concessionaires (except for 2005 when the baling started) – see table 11 below. As the report of the Sofia Consulting Group (SCG 2007), commissioned by the municipality, points out – despite the ever increasing waste fee income and costs, especially with baling, there has been no permanent solution in sight. Even more – it can be said that the problems are deepening.

Table 11. Amounts utilized by the concessionaires

Year	Concession companies			
	Chistota Sofia AD	Volf 96 OOD	DITZ AD	Total
2001	30,220,134	12,669,160	12,199,883	55,089,177
2002	29,844,417	12,736,314	12,420,774	55,001,505
2003	29,770,883	13,566,897	12,673,855	56,011,635
2004	28,979,438	12,904,171	12,483,981	54,367,590
2005	18,004,112	9,342,067	9,653,539	36,999,718

Source: SCC 2006a

The companies had to provide reasons about the increase in costs. One of the major cost items are the waste bins that they have to provide. The Access report (2003) provides examples of the cost breakdowns of Volf 96 and DITZ (letters dated 584/27.03.2003 and 334/27.03.2003). After replacing once the waste bins in their districts in 1999, in the next three years they claim to have replaced them three and a half times, which is beyond any economic logic. Chistota Sofia declared in a letter 151/3.04.2003 that they had replaced the bins after the initial replacement “only” one and a half times. BNAO (2004) found out that there is no on-going control on the number and type of waste bins, which were price determinants for the concession payments.

According to Access (2003) the concession contracts for the management of Sofia waste set a “magical frame, for which every concessionaire can only dream of” and the reasons for that are summarized below:

- 1) no obligation to account for the number of waste bins;
- 2) it is impossible to make any real evaluation of the conditions of the waste bins;
- 3) impossible to perform a stock count;
- 4) impossible to calculate depreciation expenses;
- 5) impossible to evaluate the necessity for replacements of outdated waste bins;

- 6) impossible to determine the number of actually replaced bins;
- 7) impossible to determine how many bins are only reported as replaced;
- 8) impossible to determine the real profit made by the concessionaires;
- 9) impossible to independently control the replacement procedures;
- 10) all financial information for the waste bins replacements is available only to the concessionaires.

The Access foundation (2003) concludes their report on the waste concessions in Sofia with several major points:

- 1) there are violations of laws and procedures;
- 2) the decisions made are at the expense of the public interest and the spirit of competition (the owner of Volf 96 and DITZ is the same person and he controls Chistota Sofia as well);
- 3) there are unclear criteria for the selection of winners of the concessions;
- 4) there are unreal valuations of the candidates;
- 5) there are financially illogical practices;
- 6) there is a serious discrepancy between the increasing expenses and the end results (Sofia is not getting cleaner);
- 7) there is lack of control of the waste management activities, executed by the Sofia municipality;
- 8) there is lack of public access to waste management related information.

So there is a reason why the new owner of the concessions – Equest – declared before the final deal that they were willing to take on the contracts, only if they remained unchanged. And the old scheme was played again – three months (on June 25th) after the purchase of the concessions, the new owner declared that they need additional BGN 14 million to clean the city. Moreover, as *Capital Weekly* (5-11 May 2007) emphasized, the story of the concessions of Sofia waste shows one more thing – the business with waste becomes extremely profitable once there is no competition. If the three concessionaires, owned or controlled by one person, were not monopolists over the waste for more than 10 years, it is hard to believe that the situation would have gotten that critical and the city most

probably would have been much cleaner. This is further supported by the report of BNAO (2004) that stated that there were no conditions that would allow for competition, which would guarantee comparability of prices and quality and concluded that all of the above weaknesses predispose inefficient concessions and low protection of public interests.

Ivaylo Hlebarov from the NGO Za Zemiata expressed his view about the concessions in a conversation on 18 May 2007:

“instead of preparing a long-term plan and having a vision about waste management, now the concessions are sold, unchanged. Basically, nothing has changed, just the owner, which does not mean much as the contracts are the same. Now Equest will be trying to get to operate the future plant. In this way the waste management will be totally monopolized which would go against public interests”.

The positive sign is that the at least some of the councilors realize that the waste management is a profitable activity and needs to be reformed. In an interview for *Dnevnik Daily* (29 March 2007) the councilor Vladimir Karolev said that “We won’t let the waste management be such a profitable activity as in the times of the previous owner of Chistota, Volf and DITZ – Rumén Gaitanski”.

The concessions of waste created a lot of tension among the administration itself and the public. They proved to be a lucrative business, which benefited the concessionaires at the expense of the municipality. The positive news is that the administration is trying to prevent the past events happening again with the new concessionaire.

The baling of waste

The situation is getting more complicated by the baling of waste done currently. A significant amount of money is spent on baling – 27% of the total budget for waste management, as can be seen from table 12 below.

Table 12. Necessary amounts for waste management activities for 2006 in BGN

Waste collection and transportation	Waste management			Street cleaning	Total
	Total	Baling and temporary storage	Maintenance and re-cultivation of the landfill		
31,769,535	25,735,807	22,535,807	3,200,000	27,820,714	85,326,056

Source: SCC 2006b

There are three companies that bale the waste and all of the three have guaranteed minimum quantities to bale – each has 105,000 tons. Moreover, one of the companies – Chistota Iskur – is a municipal company. It charges three times more than the other company Miks PS for storage of a bale (MIKS – 0.92/bale/month, while Chistota Iskur – 2.60/bale/month). Table 13 below shows a breakdown of the expenses for baling and it can be seen that Chistota Iskur charges significantly more than the other company for storage.

Table 13. Breakdown of expenses for baling for 2006 in BGN

Expense item	MIKS PS OOD	Chistota Iskur EOOD	Ekoel-6 OOD	Total
Baling	3,532,200	3,136,350	3,629,850	10,298,400
Transportation	640,211	574,613	1,079,505	2,294,329
Unloading and warehousing	916,650	561,600	-	1,478,250
Temporary storage	627,900	4,080,960	-	4,708,860
Total	5,716,961	8,353,523	4,709,355	18,779,839
Total with 20% VAT	6,860,353	10,024,228	5,651,226	22,535,807

Source: SCC 2006b

In the discussion table on BNT from 22 September 2006 Marin Marinov from IC Trebich said that if we want to find who benefits from the crisis we should “follow the money”. At the same table the councilor Vladimir Karolev claimed that the previous mayor Sofianski “said that the only solution is baling. In my opinion someone has long-ago prepared a scheme so that certain companies purchase and operate the equipment and one of the biggest lies is that it is a temporary solution”.

In an interview on 1 June 2007 Marin Marinov stated that

“baling is a financial scam. What they do now – they bale here, send the bales to Tzalapitza, there the bales get torn apart and are landfilled. That is absurd. One bale is approximately one ton; only in Trebich they make 300-350 bales/day. Not to mention that the municipality pays a fixed amount, have or have not waste. So there is no motivation for separation or waste minimization”.

Baling is a very expensive temporary solution to the crisis which also generated a lot of tension among the administration and the public. Is it necessary especially now when the waste is baled, transported and landfilled? The municipality is trying to select a technology for the future waste treatment plant to replace baling but this also proved to be not that easy.

Lobbying in the municipality

There are many interests involved and one of the most important stakeholders are the city councilors themselves. They are elected officials but they do not work constantly for the municipality – they have other jobs/businesses and usually meet once a week to decide on municipal matters. Many outside observers and NGO representatives accuse some councilors of lobbying interests. An exemplary story is the proposal of two councilors in March 2007 to start direct negotiations with the Swedish company Tekniska Verken AB for the construction of the waste treatment plant. The deputy mayor Maria Boiadjiiska explained to the councilors in a meeting of SCC that there was no possibility for direct negotiations as this would be a violation of several Bulgarian laws. Moreover, the European commission recommends that for public-private partnerships tenders, not direct negotiations, are more appropriate. Despite the clear explanations of why it is not possible, one of the councilors that suggested the idea said that he hadn't heard one single argument against his proposal.

In an interview in *Mediapool* (5 March 2007) a councilor described the proposal as “criminal irresponsible scheme” and another one – as a “joke”. As a result of the opposition, with a decision 145/6.3.2007 the Sofia City Council rejected the proposal of the two councilors. The mayor Boiko Borisov fully supported the opinion of his deputy Boiadjiiska.

In an exclusive program of TV7 on 20 February 2006 the mayor Boiko Borisov, when asked why there were so many lobbies in the SCC, said that this was so “because the brokerage fees are the ones that prevent us from having a plant even now”. In the same program Nikolay Zhelev, a city councilor, said that “councilors should not make statements regarding the technology” of the future waste treatment plant, it should be left to the experts. Even the deputy mayor Milor Mihailov was disappointed by the arguments in the SCC for determining the waste treatment technology – on 23 May 2006 he signed a report of the environmental commission with a reservation – as he put it, “the rejection of the members of the commission to determine a technology hinders the choice of a site”.

When asked to share his opinion about the basis of the crisis, the Ombudsman of Sofia Angel Stefanov said in an interview on 16 May 2007 that

“It was a known fact that the landfill in Suhodol would not exist forever. I know that during the first mandate of Sofianski there was a project for a plant. They even applied for financing from ISPA and PHARE but were rejected because they said that Sofia needs a landfill, not a plant. Moreover, there are very powerful economic interests involved. There are even city councilors who lobby for their technologies and companies. There is too much money involved in waste”.

In a conversation, Ivaylo Hlebarov from the NGO Za Zemiata on 18 May 2007 said that

“at the basis of it [the crisis] are the economic interest of various city councilors and other businessman. Everyone tries to sell their solution and cannot reach a consensus. When the Jaspers experts came they said they there cannot be a permanent solution before there is a clear morphological analysis of the waste, so that forecasts can be made. Because now they have decided on a plant, but if we consider everything – separation, recycling, minimization, landfilling – then we might not even need a plant. But money and politics together – and see what happens”.

Lorita Radeva in a conversation on 31 May 2007 supported the idea that there is not much talk in the municipality regarding waste minimization and recycling, the focus is mainly on landfilling and the future plant. She stated that “there is significant lobbying for various technologies and the decision is already made”.

Another activist – Mihaela Belcheva from IC Suhodol – said in a conversation on 15 May 2007 that building the plant in the best environmental way would mean spending a lot of money. Her worry is that “in Sofia there is too much corruption and economic interests to allow us to rely on the administration to take the best possible decision”. Money and corruption are her reasons for not having a solution to the crisis yet.

This is further supported by Valia Kostova from the Green Party in a conversation on 30 May 2007. She said that “the basis for the crisis is money. That is unfortunate”.

Economic interests lay in the basis of the waste crisis in Sofia. It all started with the three concessions for waste management that proved more lucrative to the companies than to the municipality. Further on, the interests transferred to the baling of waste which is a very expensive temporary solution. Currently the discussion revolves around the future operator of the potential waste management facility. All these arguments stand in the way

of solving the problem and providing a permanent environmentally and socially acceptable solution.

Political reasons

The economic interests of the city councilors are intertwined with the political interests of the parties they represent. Political arguments hinder the decision making process, as can be seen in the example below.

After the first discussions in the Sofia City Council of baling as the salvation of the municipality out of the crisis some disagreements emerge. Several councilors (from the Bulgarian Socialist Party (BSP) mainly) contested the argument that the bales could hold for three years. This idea was “vehemently protected by Neli Manova” (BNT 2006), the chairwoman of the environment commission in the council (from Union of Free Democrats (UFD)). According to the opponents of baling, a bale could stay intact from 10 months to 2 years and still the danger of inflammation and gas emission is not avoided. The opponents noted the fact that there had been nothing done in relation to the waste treatment plant as of June 2005. As a result of these political arguments no decision was made. However, despite the arguments against baling, it started after another period of crisis in October 2005, when the Suhodol landfill was closed.

A further point in the political discussions was made in *Capital Weekly* (10-16 February 2007) when days before the sale of the concessions to Equest the councilors from BSP declared that they wanted cancellation of the contracts. According to the newspaper, no logical explanation was provided – why now, after several years since it was publicly admitted that the concessions were disadvantageous to the municipality. As the newspaper analyzed the situation, it appeared that BSP had no solid arguments to support eventual court cases and no answer to the problem of who would clean the capital if the concessions were terminated. As a response to that, the managing partner of Equest Georgi Krumov said that he would withdraw from the deal if the concessions were canceled. He met with the prime minister (also from BSP) who assured him of his support. To the newspaper, Equest admitted that the purchase of the concessions was a step towards the bigger goal – the operation of the future waste treatment plant. Experts consider that the operator of the plant would earn more than what is earned from the concessions. The newspaper further analyzed the political support to several of the big players for the future plant – until recently it was

considered that Hristo Kovachki (a businessman, owner of Chukurovo mines) had the strongest opportunity for the plant. He is supported by the Movement for Rights and Freedom (MRF) and several of the ministers. However, Equest would be a strong competition to Kovachki, as the company is supported by the prime minister.

Many see one of the problems to be the involvement of political interests. “There is too much politics involved. Now they changed the law so that for temporary storage no EIA is required. Well, what to say – money and politics” (Marinov pers.comm.).

The view that there is too much politics involved is supported by Petur Traikov, Director of the Environment department in the municipality in a conversation on 1 June 2007. He said that “the problem of waste in Sofia is strictly for experts, but it was so much politicized that no decision can be reached in time”. His view that the waste problems receive too much political attention instead of expert opinions is supported by Kharbanda and Stallworthy (1990), as already mentioned in the literature review chapter.

Angel Stefanov, the Ombudsman of Sofia, in a conversation on 16 May 2007, commented on the Chukurovo mines as an option for a landfill and said that they “were a good option, but unfortunately too many political interests got involved and the whole thing collapsed”. He further stated that even now the municipality has no clear plans because “many interests got entangled”. Even the involvement of the government is contested – in his view it participates

“mainly for political purposes, to get dividends the one who is in power. This is true especially when the mayor is from a different political party – then it is bad. It is a known fact – more money to the mayors from our party, let’s cut the opposition. The mayor Borisov once said that if the state does not want to help for solving the crisis, then it should return the money that Sofia paid to the budget. But at least the government paid for Karlovo and Plovdiv”.

Lorita Radeva from IC Druzhiba provided an example of the political interests involved and how they prevent the resolution of the problem in a conversation on 31 May 2007:

“We announced a protest, which was for all citizens groups involved in the crisis and later on came political demands and our group withdrew. The protest was unsuccessful due to people who seek political benefits, instead of solving purely public problems”.

Also there is politics between the local officials and the government – as Mrs. Radeva pointed out:

“The ex-environment minister Evdokia Maneva said that the government is not obliged to solve Borisov’s problems. And that is how the problems of Sofia, which are national – I mean ¼ of the population lives here, turned into a political coin to be flipped between the mayor and the government”.

Her view is supported by Mihaela Belcheva from IC Suhodol in a conversation on 15 May 2007. She claimed that

“the politicians only exploit the problem for their own good. When election time comes they promise solutions for everything. After elections they ignore the problem. That is why our group has distanced itself from any political ideas”.

Another example for political misunderstandings is provided by Valia Kostova from the Green Party in a conversation on 30 May 2007. She stated that

“the maximum period of storing the bales is 3 years if they will be recovered or 1 year if they will be landfilled or burned. One and a half years have already passed and the bales are still there. The site for temporary storage is a landfill in reality and the truth about that was not announced by MOEW. Even in the very beginning there was no clear idea what to do with the bales. The Green Party insisted on publicizing the whole information, the citizens groups also joined, but the problem got politicized and nothing happened”.

The main conclusion is best described in an exclusive report from TV7 from 20 February 2006: “The hard legacy from the past administrations, the empty promises and open lies to the public have made the task of solving the crisis almost impossible, especially after politics gets involved”.

Administrative reasons

The conclusion of TV7 leads to the next significant reasons for the crisis – “hard legacy from the past administrations, the empty promises and open lies to the public”, or as put together – the administrative hurdles experienced or caused by the municipality and the city council.

Internal programs

The municipality has commissioned several reports to deal with the problem and identify critical issues and necessary actions.

The report of Sofia Consulting Group (2007) approved by the city council provides several administrative problems faced by the municipality and the council. Among them are the lack of information gathering procedures and the lack of strategic vision. The administration cannot prepare adequate financial analyses and has none due to the lack of information. The municipality emphasizes the need for immediate actions without actually having clear vision for the specific steps. The waste management program (SCC 2006a) was approved in June 2006 and states that baling sites are approaching their maximum capacity. So the municipality knew that the sites are getting exhausted in June 2006 and nothing long-term was decided until protests started again and the bales could not be stored anywhere in Sofia.

The report (SCG 2007) emphasizes the fact that “unexplainably why” no full morphological analysis has been performed so far, despite the fact that it is one of the most essential elements when designing a long-term waste management strategy.

The lack of precise morphological analysis is a serious impediment for the choice of measures and actions aimed at waste management and in particular for the choice of a permanent treatment method, as stated in the waste management program (SCC 2006a). The program contained an approved action plan, however, some of the points are already missed – e.g. the creation of a waste related database, optimization of the recycling schemes, implementation of GPS controls in the waste transportation trucks, gas emission

capturing from the Suhodol landfill, etc. Why were these action points missed – no official explanation is provided. Some claim lack of money, others – lack of will.

The first waste management program of the municipality available to the public dates back to 1997. Its examination shows that it identified the same problems as the new programs. In brief, the old program (SM 1997) described seven major problems: 1) lack of separation and recycling schemes 2) need to reorganize the concessionaires' activities 3) insufficient funds 4) low motivation of the citizens to participate in waste management programs 5) lack of control for waste disposal 6) lack of a suitable location for a new landfill 7) lack of long-term waste management programs. Again, as in the new programs, action points and deadlines were agreed and then missed. Also, the program (SM 1997) suggested that for the period 2000-2005 baling of waste and depositing the bales in a mine near Sofia was a viable option. So this alternative existed even then, even though the administrators claimed that it was a new option, and just a temporary one. BNT (2006) points out that as the tension in 2005 was escalating the municipality quickly imposed the view that baling was the only solution to the crisis until a treatment plant is built.

The program (SM 1997) also stated that the only landfill in Suhodol could be used several more years but two years before the closure an alternative site had to be found. Art.17 (1) of the Waste Management Law (2003) states that the persons responsible for treatment of waste inform the mayor of the municipality two years before the capacity of the landfill is exhausted. Art. 17 (2) continues that from then on the mayor is responsible for finding a new landfill or other waste treatment options. So if the municipality had known since 1997 that Suhodol was approaching its end, why nothing had been done and the crisis happened?

As it can be seen, the administration is abundant with programs. However, the problems were known in 1997, if not earlier, and as far as the situation is now, nothing significant has been done. One of the reasons why this might be so is discussed below.

Artificially created crisis?

There are many who claim that the crisis was artificially created by the municipality. “The crisis was provoked by Sofianski, so that there is an official crisis and unpopular

measures are taken, so that money is made”, claimed Marin Marinov from IC Trebich in a conversation on 1 June 2007. Such a point was made also by the city councilor Vladimir Karolev in an interview in *Sega Daily* on 22 March 2006. He discussed the people involved in the crisis and said that

“The waste crisis is artificially and purposefully created. The people from Suhodol are deceived on purpose, nothing has been done to improve their infrastructure on purpose by the previous administration, so that they become embittered. Those who win from that are the ones who knew how it would go and who, in my opinion, have created preconditions for a long-term temporary treatment and storage of waste. And who wins is obvious from the fact where the waste is stored. It is impossible not to find a landfill place in the whole Sofia field, it is ridiculous. Total delusion. It is either because the aim is for the waste to go some place already determined or it is due to administrative incompetence. It is all about money, and there is a lot of it”.

This is further emphasized in a declaration of the residents of Suhodol from January 2006. Grigorov (2006) states that the waste crisis was artificially created for political and economic benefits of the previous mayor Sofianski and the SCC. It benefits the concessionaires as well. It is not logical to think that the administration does not know the laws or that we are governed by illiterates. Grigorov (2006) continues to ask the question – then what are the reasons for the inactions of the municipality? Also, in a press conference of 10 citizens groups on 01 February 2006 Veselin Dimitrov from the environmental association Vrubnitza said that the crisis was artificially created by the previous mayor Sofianski. This view is supported also by Ognian Chipev from IC Novi Han in a press conference from 26 June 2006.

Valia Kostova from the Green Party extended that idea in a conversation on 30 May 2007 by saying that

“The crisis itself was artificially created so that in a crisis situation it is easy to take extreme measures, which are normally expensive and unpopular and the crisis allows for avoiding procedures. In a time of crisis people are easier to persuade and ready to accept such decisions. The waste fee cannot be transferred to other items in the budget – it has to be used for waste. So there was the situation when there was excess money that had to be spent. That is why the crisis was created, expensive measures were taken and the money spent”.

There is no documental evidence that the crisis is artificially created, all the available information is based on the personal view of stakeholders in the process. However, this

opinion shows the deep divide between the public and the administration and the mistrust towards the actions of the municipality.

Court cases

There are several court cases related to the waste crisis that portray the negligence of various municipal administrators and the Ministry of Environment and Waters. All of the cases are in front of the Supreme Administrative Court (SAC).

The first court case relates to the proposal of the government to use Chukurovo mines as a storage place for the bales. With a decision 4107/18.04.2007 the SAC declared the government decision to deposit the bales in Chukurovo mines void. The reasoning of the court is as follows (SAC 2006a): according to art.12 of the Waste Management Law (2003) the Council of Ministers determines the necessary measures in case there is danger to human health and the environment from **hazardous** waste. On the basis of that article the Council of Ministers determined that the necessary measure was to appoint Chukurovo mines as a site for storage of **municipal solid** waste. However, art.16 of the same law states that it is the mayor of the municipality who organizes all activities related to municipal waste and the mayor is the only person to appoint new landfills. Moreover, there is no indication that the baled waste was hazardous, so that to require the involvement of the government. On this basis the government decision was declared void as it was issued by a body that does not have the authority to issue such decisions. The conclusion of the court is that the whole situation is provoked by negligence of officials.

A further court decision regarding the decision making of MOEW and the negligence of officials and their disrespect for the law is decision 5375/19.05.2006. It relates to the necessity for environmental impact assessment (EIA) for the baling and storage of waste in Kremikovtzi. The Supreme Administrative Court disaffirmed the government decision and demanded a decision in compliance with the law. The reasoning of the court is as follows (SAC 2006b): MOEW decided (19-IIP/30.06.2005) that there was no need for EIA of the baling and storage of waste in Kremikovtzi, as the ministry considered the project as “extension or change of production activities of existing facilities” (art.92, par1, p.1 of EIA law). In reality, as the Court has accepted, the project is a new construction of a facility for

treatment, packaging and baling of waste, as well as a site for temporary storage of bales. Art.81 of EIA law considers these activities as ones that require EIA. The ministry consideration as extension was not relevant and correct. Despite that decision of SAC the site still operates and no action is taken to comply with the court decision. When the journalists from BNT asked the prosecutor's office why nothing has been done and no one is prosecuted, the answer they received was "we don't want to comment on this subject".

The municipality is also sued in court for not complying with the law and trying to evade procedures. There are two almost identical decisions (8657/6.10.2005 and 8655/6.10.2005) as the one above of SAC regarding the two other proposed sites for baling and storage of waste. These are still appealed and waiting for a final judgment.

Decision 8657/6.10.2005 is against a decision of MOEW for not performing EIA on the baling site at Vrubnitza. SAC disaffirmed the government decision and demanded a decision in compliance with the law. As the court stated (SAC 2005b) one of the reasons cited by the government for not requiring EIA was that the site at Vrubnitza was an extension to the already existing landfill in Suhodol. A map of Sofia is attached below (figure 3) with the two sites circled. As it can be seen, if Vrubnitza was an extension to Suhodol, then two other Sofia districts had to be covered in waste so that to connect the two sites. Valia Kostova from the Green Party described the situation in a conversation on 30 May 2007 – "In order to avoid that the MOEW considered the sites as an extension to the landfill in Suhodol. The problem was that the sites are in the other end of Sofia, some 30 km away from Suhodol. That is why this decision was disaffirmed by SAC". That shows the total lack of care of the administration to comply with the law and at least to provide some good reasoning behind its suggestions.

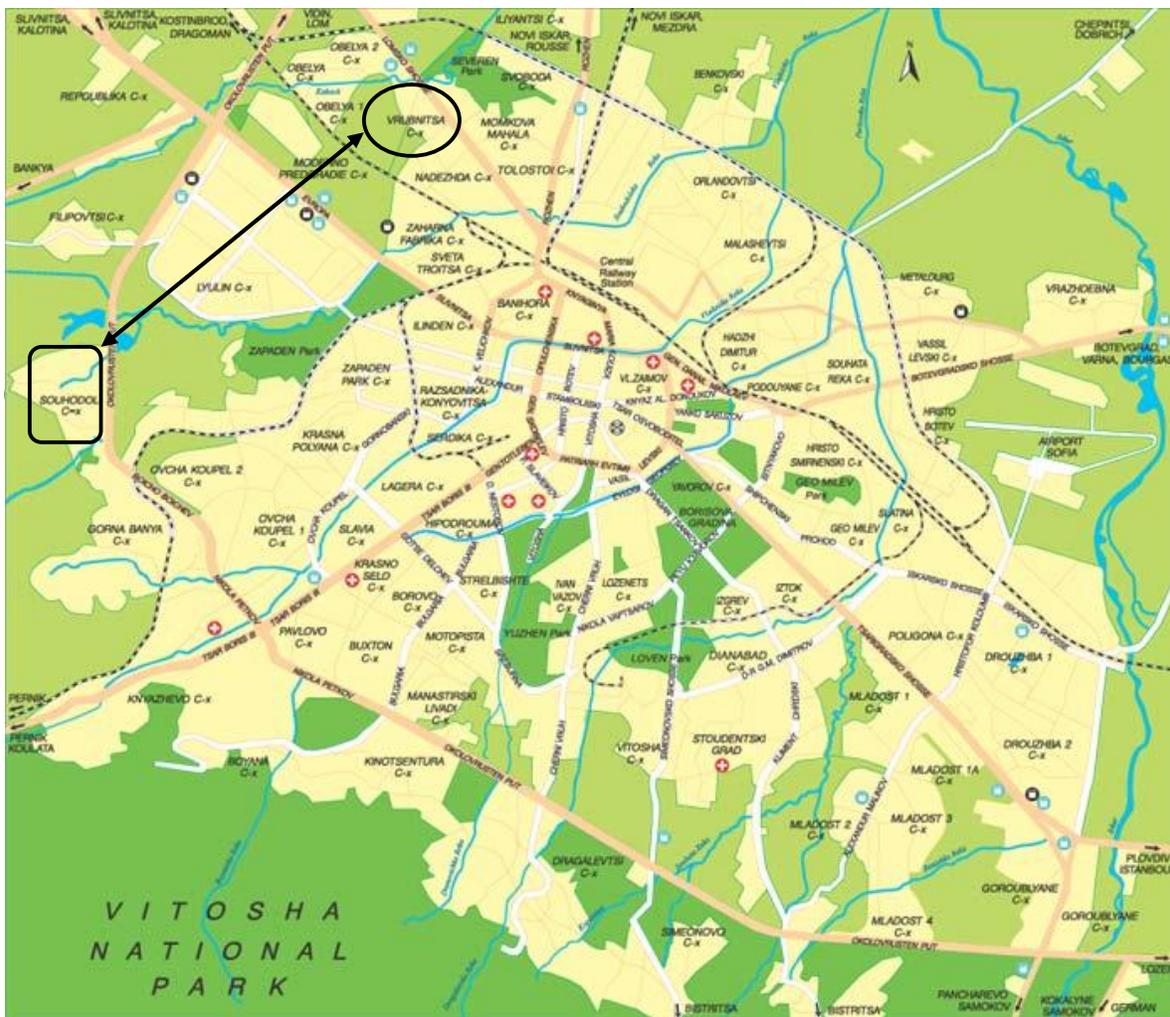


Figure 3. Map of Sofia
 Source: www.sofia.bg

An exemplary decision that shows the negligence and incompetence of the municipality and the Ministry of Environment and Waters is decision 4549/19.05.2004 of the Supreme Administrative Court. It is against an EIA decision 1-1/27.01.2003 of MOEW which allowed a cell for hazardous waste from a hospital incinerator to be built in the Suhodol landfill. The court disaffirmed the government EIA decision. In the government decision the exploitation period of the landfill is planned to be extended, which contradicts to the official obligations of Sofia municipality of its closure. The court concluded (SAC 2004) that it was only a temporary solution for the hazardous waste from the hospital incinerator and could not agree with the EIA conclusion that this was the optimal solution and there was no other alternative.

One of the questions missing from the EIA was the transportation of the hazardous waste. The way to the landfill passes through densely populated districts and the preventive measures envisioned in the EIA were not considered sufficient by the court. Moreover, there was a violation of the Landfill directive which bans deposition of hazardous and municipal solid waste in one landfill and the EIA report was prepared using incomplete documentation and not considering all the facts. The EIA report was incomplete in respect to the potential pollution of the underground water. The landfill lies in a fault and is very close (2-3 km away) to two mineral springs. Moreover, the landfill itself is located in the protection zone for the mineral springs where all potentially polluting activities are banned.

The court recommended that a health survey is performed among the citizens of Suhodol and stated (SAC 2004) that even though the citizens complain against the landfill and its operation the fact that there has been no survey so far lacks logical explanation. The court went that far as to ask itself how the landfill was allowed to be built at all, after considering all the facts.

The conclusions of the court in all the cases are against the municipality or the government decision. As Valia Kostova from the Green Party concluded in a conversation on 30 May 2007 “So what happens – three trials for sites openings and the three are stopped by the court. First time you say – a mistake, second time – again a mistake, but the third time shows intention, as if the municipality is trying to avoid the law”. Even if not avoidance of law but at least negligence on behalf of the administration can be seen from these repeated mistakes.

The landfill in Suhodol re-opened?

Every time there is a crisis situation in Sofia, the municipality claims that the only solution is to open the Suhodol landfill again. When in 2006 the municipality opted to re-open the Suhodol landfill again, the SCC commissioned various reports to evaluate the feasibility of the landfill. For example, Gulemetova (2006), a scientist, states that in the territorial limits of Sofia municipality there is no location for a new landfill and the only real possibility for waste treatment is the construction of a modern facility. However, until then Gulemetova (2006) recommends that the municipality use the landfill in Suhodol

because it guarantees water and air protection, there is no need for additional infrastructure and the distance to populated areas is in accordance with the law. This is supported by Gugalova (2006), an engineer, who states that there are no technical problems with the landfill and the possibility of environmental pollution is almost nonexistent.

Furthermore, the consulting and engineering company BT-Engineering prepared a report about the landfill and the major conclusion is that it is built in accordance with the Bulgarian environmental regulations and European best practices and can be used longer without any danger to the environment and people. However, BT-Engineering (2006) states that the lack of biogas capturing and the fact that the trucks with waste go through the centre of the district create negative feelings among the local population.

Petur Traikov, Director of the Environment department in the municipality, supported the re-opening of the landfill in a conversation on 1 June 2007. In his opinion, the landfill was “closed irregularly, prematurely” because “the law says that 2 years before the closure there must be a procedure for a new landfill, and nothing like this happened”. He also said that currently they have “submitted to MOEW all the necessary documents for opening the landfill, as it is completely safe to use, still has free capacity and cannot just sit and not be used”.

The Ombudsman of Sofia Angel Stefanov shared in a conversation on 16 May 2007 his view about the re-opening of Suhodol:

“Everyone has their rights. The rights are, broadly speaking, on 3 levels – political rights (e.g. right to vote), social – economic (e.g. pay taxes and expect an action from the municipality) and modern ones (right to a clean environment, access to information). These rights build on top of each other and complement each other. In this case the protesting groups are based in their rights, but violate the rights of many other people. That is why I think that the municipality has the right to solve the problem by ignoring the problem of a small group of people for the benefit of the bigger community”.

However, the idea of re-opening the landfill is opposed by the IC Suhodol. This committee was formed five years ago and was active during all the protests for the closure of the landfill and during any attempts to open it. In a conversation Mihaela Belcheva on 15 May 2007 said that “the administration constantly produces some people who claim that the landfill in Suhodol is the only solution for the moment. For example, the mayor Borisov said that Jaspers experts said that Suhodol must be opened. But this is nowhere in the report, not to mention that the report is not public”. Moreover, she opposed the view of the

Ombudsman of Sofia that the people of Suhodol are violating the rights of the other citizens of Sofia. She said that “the media constantly shows that the people from Suhodol are against the other citizens of Sofia and put people against each other”.

There is a deep division between the municipality and the people from Suhodol regarding the landfill there. The administration claims that it is safe for the environment and human health, however, their view is not supported by the citizens in Suhodol and other environmental organizations. Even if the municipality is right and the landfill is safe to use, the citizens can hardly be persuaded to agree to this as a result of the deep mistrust towards the municipality.

Baling of waste

Later on, many protests were initiated as a result of the baling activities. After several months the bales started to leak and emit gas and odor. However, the administration took no measures as to penalize the baling companies despite the fact that the decisions of the Regional Inspectorate for Environment and Waters Sofia that granted permissions to perform activities related to baling, temporary storage and transportation of waste have certain conditions. According to RIEW 2005, the company is obliged to:

- Yearly to measure the qualities of the air, soil and water and to present the results to RIEW Sofia
- To monitor strictly the entirety of the bales
- To maintain the baling equipment
- To take all necessary measure not to mix hazardous and other waste as well as recyclable and non-recyclable waste
- Not to allow the pollution of the site and the nearby territories.

In the press conference on 01 February 2006 Lilia Donkova from Initiative Committee (IC) Seslavitzi confirmed that point – she described the clause that the baling companies have to maintain the bales intact and pointed out that it was not followed. However, there is no control executed from the municipality. In a press conference on 26 June 2006 Marin Marinov from IC Trebich said that there was plenty of photographic evidence that the bales are leaking (there are some cases when tomatoes and peppers started

growing from the bales), but the RIEW inspections are only a formality – the inspectors perform only visual checks.

Valia Kostova from the Green Party in a conversation on 30 May 2007 further emphasized that “the biggest problem of the bales is that now no one checks what is being baled. Maybe there is hazardous waste as well, who knows. There is no problem in baling construction waste as long as it is crushed and not too visible”.

This point is extended in a report 93-00-4/5.01.2006 from the deputy mayor Milor Mihailov that discusses the situation with the baling of the waste and admits that environmental standards were definitely lower than usual (Mihailov 2006). The report identifies many of the issues that the residents of various districts in Sofia and NGOs protest against. Mihailov (2006) admits that serious impediments to the baling process were met. Those include: the lack of public acceptance and EIA, the frequent malfunctions of the baling equipment, the approaching capacity limits of the storage sites, the problems with the guaranteed entirety and environmental safety of the bales and the “indecently” high prices paid for baling. The deputy mayor concludes that all these impose the necessity of immediate actions for permanent solution of the municipal waste crisis.

One example of the administrative capacity or the lack of it was the resignation of the deputy mayor Milor Mihailov in October 2006. The mayor Boiko Borisov said that he accepted the resignation “because he was misled by him” (BNT 2006). The mayor ordered an investigation whether the crisis was provoked on purpose and stated that the contracts with the baling companies which were hidden from him contain a clause according to which the companies had to find their own baling sites, not the municipality. This makes the efforts of the municipality to find a site pointless, as it was already a duty of the company for which the municipality had already paid. But what caused this mistake which turned out dear for the municipal budget – was it negligence? The responsible person still remains unknown.

During the press conference on 26 June 2006 Petur Penchev from the NGO Ecoglasnost pointed another problem with the baling contracts. There is a clause that states that the municipality must guarantee a minimum amount of waste to be baled per day (already discussed in the current situation chapter). If the amount of waste cannot be supplied then penalties are paid. Mr. Penchev claims that this is also an impediment to the

implementation of any separation and recycling plans, as this would decrease the amount of waste to be baled. The baled waste is exactly the amount of waste generated per day in Sofia, so in order for the municipality to meet the minimum requirement for baling and not to pay penalties for less waste all the waste generated must be baled. This idea extends to the future treatment plant which would have a capacity of approximately 1,000 tons of waste per day, which is the amount of waste generated currently in Sofia. So there is no room for recycling and minimization, as it would decrease the amount of waste treated in the plant and would incur penalties for the municipality.

On 28.08.2005 representatives from IC Trebich met with the acting mayor Gerdjikov. “It turned out that the municipality does not have the necessary documents and permissions for the baling sites but will obtain them post factum. The illegality of their actions the administrators excused with the pronounced by them crisis in the city” (Marinov pers.comm.).

There are irregularities with the baling contracts as pointed out by NGOs and citizens groups and admitted by the municipality. However, despite this knowledge and the protests of the public, nothing has been changed or done to improve the situation so far.

The Ombudsman of Bulgaria and the collective responsibility of the city council

One of the biggest critics of the municipality and the city council has been the Ombudsman of Bulgaria Ginio Ganev. He issued an opinion on the Sofia waste crisis in July 2005 and his conclusion was that certain actions and/or inactions of first and foremost Sofia municipality have led to deepening the crisis (Ganev 2005).

First, the Ombudsman pointed that the handling of the crisis was a “demonstrative example” of bad administration on behalf of the mayor and the city council – due to protests of the citizens twice have the mayor and the SCC promised to close the landfill. In both cases the mayor did not hold to the promise and in this way has damaged the trust in the institutions.

Moreover, Ganev (2005) claimed that the integrated solution to the crisis is the construction of a waste treatment facility. However, a plan or project for such a facility has not yet been prepared. This negligent behavior of the municipality is a gross violation of

the Waste Management Law (2003), art.17 which requires two years before the closure of a landfill the mayor has to start a procedure for opening a new one.

As a result of the crisis the municipality chose baling as a temporary solution. However, Ganev (2005) stated that the decision of MOEW that the sites (Vrubnizta, Lokorsko and Seslavitzi) did not require an EIA is a violation of art.92 of the Environment Protection Law. Without a proper EIA the facilities must not be allowed to function, which is supported by the decisions of SAC, discussed above. As a result of the protests and the legal cases the municipality had to look for new locations.

The Ombudsman (Ganev 2005) also found out that the municipality was in another breach of the Waste Management Law (2003), art.29 because until the time of the opinion – 2005 – the municipality had not approved a long-term waste management program. The first long-term waste strategy was approved later on in 2006 as a result of the pressure from various groups.

But the Ombudsman did not put the blame only on the municipality. In his opinion (Ganev 2005) the central executive authorities had not controlled the municipality in the process of waste management. In the Waste Management Law (2003) MOEW is obliged to control certain actions/inactions of municipal officials. The Ministry had not executed its obligation in a time when it was obvious to the public that Sofia municipality had abandoned its obligation in terms of waste management. In a presentation to the Bulgarian Parliament on January 2007 the Minister of Environment and Waters admitted that the municipality of Sofia still has no solution to the waste problem – neither a waste treatment facility nor a landfill (Chakarov 2007). However, even though the Minister recognized the issue there is still no one that has been penalized for that.

The most important point in the Ombudsman's opinion (Ganev 2005) was that there must be penalties for the officials responsible for initiating and prolonging the waste crisis.

The discussion above of the various problems related to the administration led the Access report (2003) to conclude that the Sofia City Council should assume collective responsibility for the waste management crisis. In the press conference on 1 February 2006 Snezhinka Tzvetanova from IC Mramor provided an example of the issue – the contracts with the baling companies state that they are the ones to find their own sites, not the municipality. However, this was not how things happened and the administration supplied

them with sites, causing a lot of tension. The contracts were signed and after that the SCC voted to provide the companies with locations. Mrs. Tzvetanova points this fact and asks the question – who is to blame? In another press conference on 26 June 2006 Mrs. Tzvetanova said that both the city council and the Ministry of Environment and Waters evade responsibility. In her opinion, officials must be held accountable for the situation, so that it does not happen again, but the problem is that the responsibility for actions is diluted – SCC delegates to the mayor, the mayor – to the deputies and so on. The worrisome part, according to Mrs. Tzvetanova, is that SCC as a collective body always evades responsibility and accountability, so SCC must be held collectively responsible for the crisis.

Valia Kostova from the Green Party extended this idea in a conversation on 30 May 2007. She said:

“The main excuse that the administrators use to justify the lack of decisions is the collective responsibility. Bad decisions are made and no one bears the responsibility for them. It is true that the decisions are made by the SCC but it is made of people who voted in a certain way. There must be a legal way to find the personal responsibility within the framework of collective one. For example, the municipality issued three collective acts which are disaffirmed by SAC and no one bears the responsibility, despite the obvious facts that someone did not do their job”.

The problem with “who is to blame” is an important one, as it determines the future outcomes of administrative actions. As no one is held responsible for the problems there is no way to motivate officials or to threaten them to take more responsible decisions, taking into consideration all stakeholders and involving the public in the decision making process.

Administrative capacity

Another problem identified by some of the stakeholders in the crisis is the lack of skills of the officials for waste management and public involvement. As Mihaela Belcheva from IC Suhodol said in a conversation on 15 May 2007

“most of them are old school – they show total neglect of the citizens, not to mention that their environmental knowledge has stopped in the 1960s, when they graduated from school. That is why new ideas of waste management can hardly pass. Go and try to explain about waste hierarchy, new treatment methods, etc”.

Moreover, the municipality does not have trained personnel for waste monitoring, control and management of waste related projects and concessions. The SCG report (2007) also points out some dysfunctions in the administrative structure of the municipality – some of the important divisions in the administration have doubling functions and important tasks are not specified in the job descriptions of a particular division in the municipality.

Sterio Nozharov, Director Investment policy in MOEW, said in a conversation on 21 May 2007 that

“one of the main obstacles to effective waste management is the low administrative capacity and the lack of qualified employees. The salaries are very low, especially compared in private companies. We cannot attract and retain qualified people. And in the municipalities the situation is even worse”.

The problem of administrative capacity is a common problem for the whole country. However, it should not impede the solution of the crisis as there are many external parties offering help (e.g. capacity building NGOs as Access Foundation) and many EU programs that can assist in finding the best solution.

Although many programs were written and goals established, the majority of the waste problems are still not solved and new ones appear constantly. Almost every action of the municipality is met with fierce resistance by the people concerned. As long as there is no one to be responsible the situation of decision making would not improve significantly.

Public participation and communication

The whole period of the crisis has been characterized by a constant tension between the administration and the public. Among the reasons for the crisis and the lack of solutions are the miscommunication between the municipality and the citizens and the absence of public participation in the decision making process.

Currently, the municipality recognizes the need for public participation, at least in its new waste management programs. However, the reality and the actions of the officials do not often support that view.

Legal violations

When the Chukurovo mines were suggested by the government the villagers began active protests against the decision. As there was no response from the municipality and the protests seemed futile, the local residents took the government decision to the Supreme Administrative Court, which has so far declared all decision related to the waste crisis void. Resorting to the court is the last measure available to the protestors. In a press conference on 26 June 2006 Marin Marinov from IC Trebich pointed that during their campaign against the baling they realized there was no point in protesting and focused their efforts on legal actions.

The SAC decisions discussed in the previous section also base their reasoning on the lack of public participation. In decision 8655/6.10.2005 among the other reasons for rejecting the government order the court states (SAC 2005a) that the requirement for public notification was not met – in the materials of the case there was no information how the affected citizens were informed or if they were informed at all. However, there were changes in the EIA law in September 2005 and from then on baling and temporary storage do not require EIA. However, the court noted that EIA should still be considered due to the increased public interest in the activity. Moreover, an argument in favor of EIA is art.6 (public participation in decision making) of the Aarhus Convention, which is part of the internal legislation in Bulgaria and has superiority over other internal laws that contradict it.

The baling site fits into the definition of a landfill as in point 5 of Annex I of the Convention. The court concluded that several of the requirements of art. 6 were not met: the public was not informed at an early stage of the process; the information provided was not complete; insufficient time was provided to the public to prepare and effectively participate; and the administration had not taken into consideration the results of public deliberation.

This view of the court is supported in decision 8657/6.10.2005 where the court adds (SAC 2005b) that providing access to information to the public is a guarantee for public participation in decision making. This was one of the reasons why the government decision was disaffirmed.

The requirement for public participation, which is a necessary condition for every EIA, was also violated when the municipality decided to build a cell for hazardous waste in the Suhodol landfill. The court pointed (SAC 2004) out in its decision 4549/19.05.2004 that only one meeting with the residents of Suhodol was held, not inviting the other neighboring villages that were also affected. Due to arguments with several people the meeting had been cut short and new one had not been appointed. It was obvious that the administration only formally fulfilled the requirement for public participation.

The violation of the public participation and transparency requirement – a basic principle in the Environment Protection Law – had been confirmed by the opinion of the Ombudsman of Bulgaria. In his view (Ganev 2005) the long standing administrative epic of the waste in Sofia provided evidence for total negligence of the public opinion and the protests in 2002, 2004 and 2005 were a justified answer to the efforts of the mayor and the municipality to make decisions without deliberation with the public.

The Ombudsman of Sofia Angel Stefanov further emphasized that point – when asked in a conversation on 16 May 2007 whether there is a constructive dialogue between the administration and the citizens, he stated:

“hm, constructive...the municipality acts mainly under pressure. Still the idea for transparency in decision making is lacking in the municipality, not to mention the access to information and so on”.

When the decision for baling the waste was made the municipality started looking for sites for storage. However, the residents from every district that was mentioned as a potential site started protests immediately. As a result, instead of engaging the public in the

decision making process and decide on a site together, the administration engaged in “buying” their support – the municipality declared that it “is ready to pay to the district that accepts Sofia waste between BGN 10 and 20 million (BNT 2006). This method did not work as well in persuading the public in accepting the administration’s decisions.

The NGOs controversy

Angel Stefanov, the Ombudsman of Sofia, provided further details about the distrust of the public towards the administration in a conversation from 16 May 2007:

“I have talked to many groups and been to almost every public discussion. My impression is that the people are against because the municipality has no clear idea about the plant – when, where, how”.

However, he also said that the involvement of NGOs in the process is somewhat dubious:

“what to say about NGOs...they talk to the municipality, push their own agenda, but I cannot get rid of the impression that they are not doing it for the cause, but are lobbying for various interests. But why not – they have to finance themselves somehow”.

This view is supported by Ilia Marinov from Bulecopack (an organization for separate collection of packaging waste) in a conversation on 15 May 2007. When asked about projects with NGOs he said:

“when we were starting our activities, some representatives came and asked for money for projects, not less than BGN 20,000, if less – they were not worth their time. We didn’t have the money then so we rejected them. So they disappeared. Now that we have projects they don’t show up at all – when there is money they come, when a job has to be done, they disappear”.

The negative view of the part of NGOs is supported by Petur Traikov, Director of the Environment department in the municipality. He said in a conversation on 1 June 2007 that

“first of all, there is a very serious NIMBY syndrome. NGOs only criticize without any constructive suggestions. Many of them serve various political and private interests. Not to mention that the most active people lack the necessary qualifications and talk without knowing the facts; we need qualified people to take part in the discussions”.

Sterio Nozharov, Director Investment policy in MOEW, shared in a conversation on 21 May 2007 his view on the part of NGOs. He said that “it is my impression that they are

not very active, especially with waste. They participate in several information campaigns and that was it”.

However, this is opposed by Milena Atanasova from Ecobulpack (another organization for separate collection of packaging waste) in a conversation on 15 May 2007. She said that they often work with NGOs on projects and are satisfied with their work.

The role of NGOs is controversial in the eyes of the administration. This might impact how they react to their suggestions and how they envision their role in the decision making process.

View of the administration

As already mentioned, in June 2007 the municipality received a first-class investor certificate. The current mayor Borisov expressed his dissatisfaction with the lack of national media coverage – in a press conference on 21 June 2007 he said that

“the waste topic is the only one that is politicized on purpose. It is no accident that today when the certificate is given there is none of the three national televisions. But when somewhere three villagers gather to protest, all TV stations are there to provide live coverage”.

In a previous press conference on 19 March 2007 regarding the transportation of the bales to Plovdiv and Karlovo the mayor Borisov told the residents of the districts previously planned to store the bales that they can “apologize to him for the job done for transporting the waste to another municipality and the problems evaded by the locals”. The mayor is dissatisfied with the coverage the protests received and views the transportation of the bales to other landfills as a favor to the local residents.

In a discussion table on BNT on 22 September 2006 dedicated to the waste crisis one of the city councilors – Prof. Atanas Tasev – expressed the view that the delay in solving the crisis “actually puts us in a better position”, because “now we can use the funds of the EU instead using local taxes”. Prof. Tasev agreed that the waste problem is inherited from the past administration, but he suggested that “now is the time instead of quarrelling to solve the problem calmly” because, as he emphasized, “the delay allows us to utilize funds from the EU and now is more profitable to build a plant than before”. Moreover, the professor also expressed his gratitude “to the environmental organizations for escalating the

problem – at home a problem cannot be solved unless it is escalated to the highest extreme”. So does that mean that the citizens should actually welcome the inactions of the municipality for so many years in order to potentially save some taxes now?

The professor also noted that it is essential that the trust between the administration and the public is rebuilt, because until then no dialogue can work out. In his view, the dialogue can start when they start to execute the recommendations from Jaspers, because these recommendations will be produced by an expert group and would be the most precise “messages” to the citizens. When asked if the municipality has found a solution, he said that “there is a decision, which will be announced in due time. There is a site found”. However, first of all, decisions will be made again available to the public without its actual participation. In his words there is no mention of public participation in decision making – what does it mean “will be announced in due time” and “the most precise messages to the citizens”? Moreover, the statement that there was a site found was made in September 2006 and until the preparation of this paper no such site has been announced. And thirdly, how can you rebuild the trust among the administration and the public without a dialogue first, not after? This view is supported by Marin Marinov from IC Trebich during the same discussion table who said that how the dialogue between the municipality and the citizens is supposed to work when the officials do not make enough efforts – here the professor claimed that they have found a location and a technology and the citizens groups don’t even have the feeling that those decisions have been discussed with the public.

The situation is summarized by Petur Traikov, Director of the Environment Department in the municipality in a conversation on 1 June 2007, who said that the roots of the crisis were “predominantly lack of communication and clear vision”.

The administration also recognizes some of the problems related to communication and according to Mr. Traikov it is working on it and the future dealings with the public will be better in this respect.

View of the participating public

However, the optimism of the administration is not shared by the participating public.

Currently, the various citizens groups have evolved from local protesters to supporters of the protests of other districts. Whenever there is a district to protest, the other districts either join the protests or support them with other means. For example, although the protests in Suhodol ended in 2005, the residents of Suhodol declared that they fully support the protests of the other districts against the illegal baling of waste (Grigorov 2006).

In the press conference on 1 February 2006 various representatives of citizens' groups/initiative committees discussed with the media their views of the communication with the administration. Snezhinka Tzvetanova from IC Mramor stated that the municipality wants to make decisions at the expense of certain citizens of Sofia and all the decisions taken are without any public discussion. Lilia Donkova from IC Seslavytzi added that the location in Kremikovtzi was chosen without any dialogue with the local people and even though that the site in Seslavytzi was declared illegal by SAC, the municipality still considers it as a potential location. Veselin Dimitrov from the environmental association Vrubnizta claimed that the municipality aims at transferring the blame for not finding a solution to the crisis to the protesters.

Marin Marinov from IC Trebich described the current attitude of the municipality in a press conference on 26 June 2006. He said that the municipality declared that they were keeping the next site a secret because otherwise there would be protests. This totally opposes the idea of public participation in decision making.

This view is supported by Mihaela Belcheva from IC Suhodol in a conversation on 15 May 2007. She said that talking does not solve any problems:

“After they see that talking doesn't solve the problem they go for road blocking and then something happens. I don't know why the municipality has to act only under pressure. There is no communication with the people”.

In an interview on 1 June 2007, when asked about the communication with the municipality, Marin Marinov said that it is “through tight teeth, if you ask me. The new mayor is the same as the old one, only thumps his chest”. He also complained of the inactions of the administration – “we sent 25 letters to all relevant institutions and all we received were either re-sending us to other institutions or saying that the problem is outside their competence”.

Ivaylo Hlebarov from the NGO Za Zemiata expressed his view about the participation of NGOs in the decision making process in a conversation on 18 May 2007:

“We try to participate and they try not to invite us. I remember in 2000 the administration insisted that the people were not yet ready for separation and nothing would come out of it, so let’s make a plant and landfills. In 2005 we released this zero-waste strategy before the baling started. As you may know – nothing happened, total disregard. Later on, on one of the meetings of the environmental commission at the municipality we prepared a declaration with steps to follow. At the meeting it was the last thing on the agenda and finally when we reached it the chairman only said that they accepted it as a reference point. That was it – no discussion at all. They do not follow the laws – how do they publish programs for public discussion? In the most side-cornered places in the website. Or they announce them one week before the deadline and we have no time to react. Such fooleries. When they prepared the first program for waste management for 2005 -2009 there was no public debate about it. They sent it to us and asked for comments only 2 days before the deadline. It was just an imitation of a public discussion”.

The view that the administration is trying to avoid public participation because that is how officials are used things to happen corresponds to the one expressed by Petts (2001) in the literature review section.

Lorita Radeva from IC Druzhiba discussed in an interview on 31 May 2007 the communication between the municipality and the citizens:

“at the beginning of the crisis there was an urge on the part of the administration to hide information where the sites would be. They have started to dig in Druzhiba in August and we, the citizens, understood in September and how – by following the trucks with waste. And Bulgaria has signed conventions for access to information – but it seems it is only on paper. More or less, the communication starts after the new mayor Borisov came”.

During this interview a woman appeared who works with Mrs. Radeva. She gave her a pack of documents, which she just received from the municipality and which would be discussed tomorrow on the meeting of the SCC. The other woman was outraged about how they give them documents at the last moment and how they just try to imitate public cooperation for appearance’s sake. It appeared that this happens quite regularly.

As a result of the broken promises and inactions on behalf of the administration the behavior of the residents became predictable – every time a place is mentioned as a potential site, the local people start protesting. As the journalist Ivo Nikodimov put it in the discussion table on BNT on 22 September 2006 “in those 10 years another problem was created – a total lack of trust in the institutions; now at the mentioning of a location for the

waste and people start to protest, no one trusts no one and nothing”. Marin Marinov from IC Trebich in a conversation on 1 June 2007 said:

“And now we have the situation where people are against all kinds of decisions. For example, in Trebich it is not that we don’t want it in our backyards, but we don’t want that way of deciding. I was at a seminar for waste management organized by the Dutch embassy. They said that the municipality must be the owner of the beginning and the end of the process of waste management, so that there is control. And we have the exact opposite”.

Moreover, one of the major points made by the citizens groups is that all they want is for the municipality to comply with the laws of Bulgaria. Not complying with the laws is one of the reasons why the crisis has been prolonged so much, as stated by Petur Penchev from Ecoglasnost in a discussion table on the Bulgarian National Television (BNT) on 22 September 2006.

The attitude of the public towards the municipality is a result of the many unfulfilled promises of the administration and the prolongation of the problem. Unless the issue with communication is solved, the current solution of the waste problem in Sofia is doubtful.

Current developments

There are some positive signs, as the journalist Ivo Nikodimov from BNT in the discussion table on 22 September 2006 said. He stated that “I am an optimist to the extent that I notice that some of the councilors and the government start to walk together with the city administration”. However, he expressed his concern about “the silence and the ridicule from the people who gave the waste to Gaitanski, because these are the people who are trying to prevent the solution of the problem”.

In an interview on 1 June 2007, when asked about the communication with the municipality, Marin Marinov from IC Trebich said that “the new administration especially Boiadjiiska [deputy mayor for the environment] shows signs that they want everything to be legal. So there are positive signs”.

Lorita Radeva supported the new administration in a conversation on 31 May 2007. She said:

“Borisov is the first mayor that comes to see the people in their places. Before, Sofianski only invited people to come and see him in the municipality. Borisov came to Druzhiba, gave us the documents of the Jaspers research and contracts for cooperation with citizens groups. He said that he hasn’t seen the baling contracts and that’s why he accepted the resignation of Milor Mihailov, he was misled by him. Mihailov was replaced by Boiadjiiska, she is from MOEW. She started the process of maximum contact with citizens groups, which influenced positively the crisis. The city councilors first were very untrusting, but now they have accepted her. In her presence the councilors really listen to NGOs, not just trying to push them aside. She is young and modern, it is usual for her to work with NGOs, she is ready for dialogue. Another positive effect is that the information is more easily accessible now; it is on the website of the municipality and can also be obtained upon request. Hard, but possible”.

In an interview on 1 June 2007 Petur Traikov, Director of the Environment department, shared the current actions of the municipality – they have “just finished the procedure for a choice of a consultant, which would prepare the analysis of the situation, together with a morphological analysis and recommendations for solving the problems. We will announce who that would be and by the end of May 2008 the final report must be ready”. He also said that they are trying to improve the communication with the public and recognized that there is a problem “accumulated with the years”. He also mentioned that

the administration is also considering connecting the waste fee with the generated waste, but there are some legal impediments to doing this – the law must be changed to allow for such a connection. However, as Mr. Traikov said, “there is not much discussion about waste minimization and reduction at source. We haven’t reached that level”.

Unfortunately, the speed of particular actions for solving the crisis is not sufficient to provide immediate solution. All the stakeholders agree that there must be some type of a waste treatment facility, although they disagree on the method of treatment.

Currently, the administration has picked three sites where the facility can be located. Although the method of treatment is not determined yet, the mayor Borisov and some of the councilors favor the so-called Berlin technology. In August 2006 the mayor Borisov and other administrators visited Berlin and the waste treatment technology plant used in the city. Upon their return Mr. Borisov declared that the Berlin technology was the most appropriate for Sofia. Decision 690/14.09.2006 of the Sofia City Council approved the Berlin technology for the future plant in Sofia and initiated negotiations with the Jaspers program and the European Bank for Reconstruction and Development for project financing. One ton of waste treated with this technology costs 35 Euros, so Sofia would need two such installations for a cost of EUR 80 million.

A brief overview of the Berlin technology is provided by BNT (2006) and shows that there must be separate collection and precise separation of waste. Then the collected waste is dried to get the liquids out. The remains are chopped and pressed until thin sheets (so-called eco-briquettes) are formed, which are later on burned in factories. In such a way up to 93% of the waste can be reused.

The opponents of the technology – environmentalists and waste management experts claim that there is a hidden incineration, which would not be done in the waste treatment plant, but in the factories that would use the eco-briquettes. The factories have to make serious investments in additional filters as the briquettes are rich in chlorine, which significantly narrows the potential market for the treated waste.

Despite the optimistic view of Mr. Traikov, the Environment director in the municipality, a new crisis is looming over Sofia. On 13 June 2007 the municipality announced that in November 2007 there would be again no storage place for the bales and that the only solution would be to re-open Suhodol landfill. The situation reminds of the

previous crises – it is a déjà vu. Obviously, the scenario is the same – another crisis, more protests, let's re-open Suhodol and then – let's find some expensive temporary solution. This can show that nothing has been learnt by the officials during the previous crises.

Recommendations

1. Integrated waste management system and a vision

The problem of waste in Sofia is caused to a very significant degree by the lack of an integrated waste management system and a vision by the administration for the future of waste management. All the periods of crisis were caused by some broken promise or a patchwork approach to the problem. It is still not clear where the municipality is going with its plans.

An efficient and effective integrated waste management system is urgently needed. Although the idea of it can be seen in the municipal waste management program, the actions of the administration seemed to be focused on the waste treatment plant.

The program of the Sofia Consulting Group (2007) insists that an in-depth analysis of which waste treatment method is most applicable for Sofia is performed as soon as possible. SCG (2007) envisions two-stepped program: 1st – by 2011 a long-term waste treatment facility is constructed taking into consideration the EU requirements and the lack of information gathered: (1 – pre-treatment by mechanical-biological means; 2 – incineration of what is left; 3 – landfill for the burnt remains); 2nd – program for stimulating public participation in waste management programs (information campaigns, penalties for non-compliance, public participation in decision making, financial stimuli, business cooperation).

Those measures are considered in the strategy of the Sofia City Council (SCC 2006a). However, there is also an approved action plan but some of the deadlines are already missed without achieving the targets. MOEW has issued a guide for developing municipal waste management programs which can be a useful tool to the Sofia administration.

As discussed in the literature review section, Turner (1992) emphasizes that a complete system encompasses all waste treatment methods, not like in the Sofia case – the plant will be our salvation. This is further explained by White *et al.* (1995) who provide a methodology for designing an effective system (as already discussed in the literature review

section). The system should be integrated (including all methods and all waste), market-oriented (to find uses of the waste) and flexible (to be constantly improved).

The municipality can utilize the expertise of similar in conditions European cities that are more advanced in terms of waste management. For example, Vienna has almost same-size population (1.6 million) and same industries developed (Loffler 2001). As already mentioned, Western European countries experiences in the 1980s the same waste crisis as the one faced by the Eastern European countries now. As a result of the crisis, Vienna developed a sustainable waste policy using strategic environmental assessment (SEA). SEA is more encompassing than the regular EIA because it is “conducted as a team-process, where members of the concerned authorities (including the environmental authorities), representatives of the public (the so called "qualified public") and external experts participated on an equal basis in one team” (Arbter 2001). This approach of SEA ensures that a consensus is reached and all stakeholders are satisfied with the outcome. As a result the solution has “the chance to get efficiently implemented” (Arbter 2001).

A more detailed overview of several particular details is provided below.

Complete morphological analysis and waste database creation

On a more particular point the most pending issue is to perform a full morphological analysis of the waste in Sofia and a systematic gathering of waste-related information. Ivaylo Hlebarov from the NGO Za Zemiata said in a conversation on 18 May 2007 that “we don’t know the morphology of waste, don’t do separation, so it is easy to burn hazardous waste. The control is very low”.

In any case, without knowing what the waste consists of, how much is generated, etc., how can the municipality already have a technology in mind?

Separate collection and recycling

Every author, discussed in the literature review section, emphasizes the importance of separate collection and recycling. In Sofia this is in its nascent state. However, it is worth mentioning that no matter how small scale the separate collection of waste is now, it is

picking up speed. The best part is that people do separate without being financially motivated. This was noted by Ilia Marinov (pers.comm.) and Milena Atanasova (pers.comm.), both representing separate collection and recycling organizations. Currently, the waste fee calculation is not based on the amount of waste generated, but on the value of the property, so people have no financial motives to decrease their waste. As Ilia Marinov (pers.comm.) said “we basically count on their good will and on the education of children”.

Another positive sign noted by Marinov and Atanasova is the fact that the mayor Borisov is a big supporter of separate collection and recycling and is pushing various projects and ideas on the municipality agenda. Also, Marinov and Atanasova noted that the problem of finding markets for the recycled products is already solved in Bulgaria – the problem is that recycling is too low, not that there are no markets for the recycled products.

However, a serious problem poses the lack of any experience in waste separation among the Sofia residents. As the municipality is pushing the Berlin technology this can be an important impediment as the technology requires significant separation before the treatment of waste. It is “naive to claim that Sofia citizens can build permanent habit of waste separation for a year and a half” (BNT 2006).

More efforts are needed in order to stimulate people to recycle, this time not only counting on the good will of the citizens. Financial measures are also required because “social behavior is most effectively changed through the pocketbook” (Liptak 1991).

Landfill

In any case there is a desperate need for a landfill, because there are always remains of any treatment process that need to be deposited. Ivaylo Hlebarov from the NGO Za Zemiata said in a conversation on 18 May 2007 that

“we urgently need a new landfill and a stop of the baling. Baling is so wrong – it is expensive, short-term, and the only thing you can do with the bales afterwards is to either burn them or bury them. Also increase in separation and recycling is needed”.

Marin Marinov from IC Trebich also said in a conversation on 1 June 2007 that a landfill is need. He suggested that “Suhodol might be opened and in the meantime a new landfill to be constructed. And after that to think of other measures”. The re-opening of

Suhodol is supported by Valia Kostova from the Green Party in a conversation on 30 May 2007 – she suggested that until a solution is found, “the waste is landfilled until more environmental methods are implemented, why not in Suhodol which still is not exhausted”. The administration also supports the re-opening of the landfill, as seen by its constant efforts to do that.

In his opinion of the waste crisis the Ombudsman of Bulgaria recommended (Ganev 2005) that new sites for landfilling are found, with the proper EIA performed, all-encompassing waste separation is initiated and a waste treatment facility is constructed as soon as possible.

A location for the new landfill is urgently needed. But as a result of the deeply entrenched antagonism between the municipality and the public this would not be easy. Only after open and truthful communication between both parties a site could and should be found.

2. Responsibility and compliance with the laws

However, if the administration wants to build back the trust with the public the officials responsible for the crisis have to be held accountable. The municipality needs to show that this time they are serious in not letting the events happen all over again. The problem with the collective responsibility of the city council needs a solution as well. There must be a legal way so that councilors would not be able to hide behind the veil of collective responsibility and take decisions that are not in the public interest.

As it was already stated the citizens demand that the administration does not invent rules, but comply with the present legal framework. There are numerous cases where breaches of the law have been identified and no one has been held responsible. The monitoring of the Ministry of Environment and Waters over how the municipality fulfills its obligations is weak. The Regional Inspectorate of Environment and Water, as the controlling body, needs to execute its duties more diligently.

Moreover, the role and involvement of the state – MOEW and the Council of Ministers – need to be cleared. Although the Sofia waste crisis is a municipal problem it does not affect the average municipality in Bulgaria. It is more of a national problem,

because it affects a large part of the Bulgarian population and the image of the country as a whole. So a special law for environmental issues may be adopted for Sofia (e.g. there is such a special law regarding the town plan of Sofia).

3. Review of the concession contracts

The concessions contracts turned out to be the bone of contention between the administration, various NGOs and the National Audit Office. Even though the owner is a new one – Equest Investments Balkans – the contracts themselves are unchanged. Moreover, the control over the activities of the concessionaires is low and no factual information can be obtained. The contracts need to be revised so that to better protect the interests of the municipality and at the same time the control over the concessionaire has to be increased.

4. Utilization of EU funds and expertise

Waste management initiatives are supported by a variety of EU funds. However, as Petur Traikov, Environment Director in the municipality, said in a conversation on 1 June 2007 “many financing opportunities from various European projects were missed” as a result of the lack of clear vision and communication. Once the administration has designed an integrated waste management program, then it can apply for funding from the EU and the state budget and implement the solution they have envisioned.

5. Public participation and transparency

All of the above recommendations have one important feature in common – all of them have to happen with active and real public participation. The lack of it can cause many problems both for the administration and the citizens, as seen from the Sofia waste crisis. Petts (2001) provides a set of criteria that evaluate public participation for effectiveness, as shown in the literature review section. These criteria can be used by independent organizations to measure the improvement of the administration in

communicating with the public. It is applicable not only for waste management issues, but for all spheres of the public life.

New methods for dialogue with all the stakeholders could be implemented. The Warsaw case study (REC 2007) of the blockade of the Lubna Landfill shows that mediation as a method of “effective public participation and conflict resolution on environmental matters” can bring along positive results. Also, as mentioned above, SEAs are also helpful tools for improving the effectiveness of public participation and carrying out positive results.

Conclusion

The problems with waste in Sofia are not a new issue, but during the last several years the issue has been exacerbated severely. Since 2002 there have been regular protests against, first the landfill in Suhodol, and since 2005 – the baling sites. The administration has made many promises, almost none of them actually followed, unless under the pressure of protests and road blockades. Currently, the bales of waste are shipped 250 km away to other cities' landfills. It was announced that in November 2007 those landfills would not take any more of Sofia waste and a new crisis is looming. And still there is no long-term solution in sight. The administration has tried to find alternative places for a new landfill, but the population in all locations protests vehemently against the landfill being located there. There are plans for a waste treatment facility but still nothing is actually done.

It all started with the concessions for waste given in 1996-1998 which generated a lot of discussion about irregularities during the procedure and in the contracts themselves. Managing waste, either as collection or baling, became a very profitable activity and many political actors got involved as well in order to benefit for political purposes. Economic interests lay in the basis of the waste crisis, intermingled with political scuffles.

The administration itself instead of defending municipal interests allowed for the crisis to prolong. There are statements that it was artificially created for economic purposes, however these are only speculations – there is no hard evidence. In any case, the administration in the face of the mayor and the city council showed incompetence, negligence and total lack of administrative skills when dealing with the issue.

The broken promises and the lack of communication and transparency for any waste related information created total mistrust of the public towards the administration. Currently, every action of the municipality is viewed with suspicion and people are ready to protest at the mentioning of potential sites for waste storage.

As a result of the economic, political, administrative and public participation issues, the problem with waste has turned into a Gordian knot. Unless the attitude of the administration towards transparency and communication with the public changes, no trust between the municipality and the citizens could be built and, subsequently, the protests

would not stop. The economic and political issues can be resolved by designing an integrated waste management system, involving the public every step of the way. An important issue that needs to be resolved is the problem with the lack of responsibility and compliance with regulations on behalf of the administration. All of these can be implemented with the help of the cohesive funds of the EU and the state budget.

However, a further study is needed on the future progress that the municipality makes towards communication with the public and development and implementation of a strategy and action plan, because there are indications that the new mayor and his staff are willing to cooperate with the public and to solve the problem. Also, in October 2007 there are municipal elections in Bulgaria and it would be useful to study the effect of the election campaign and the promises of the candidates to the outcome of the elections and subsequently, to the solution of the problem.

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