
INTEGRATED SOLID WASTE MANAGEMENT SYSTEM KUTAISI

QUESTIONS AND ANSWERS ABOUT WASTE AND WASTE MANAGEMENT

Communication Package for Journalists, Media
and Stakeholders

October 2016

Dear Readers,

The waste sector in Georgia has seen important changes during the past years, mostly unnoticed by the general public. The national legislation is now nearly completely aligned with the EU-Georgia Association Agreement and the National Waste Management Strategy 2016 - 20130 is setting clear goals and milestones for the transformation of the Georgian waste management system into a modern and environmentally friendly system.

We have learned that there exists a high need for easily understandable information about waste and waste management and have therefore developed this 'communication package' in which we present in form of questions and answers relevant information about all important aspects of waste and waste management.

We address this publication to:

- Journalists
- Staff of municipalities and local self government bodies
- Teachers
- Members and staff of NGOs, CBOs
- Citizens

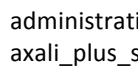
We will review this publication periodically and we invite you to send us additional questions and / or comments and suggestions that we might include in further updated versions. Please write us by email to the following address: info@waste.gov.ge

THE EDITORS

THE EDITORS - Who we are

The Solid Waste Management Company of Georgia

The Solid Waste Management Company of Georgia (SWMCG) was established in 2012 under the Ministry of Regional Development and Infrastructure.

From 2013 on SWMCG has taken over 53 existing municipal landfills all over Georgia (except City of Tbilisi and Adjara Autonomous Republic) and is administrating them. The company has rehabilitated during the 3-year period from 2013 to 2016 about 28 unregulated municipal landfills and 14 landfills were closed in an ordered manner.

During the coming years SWMCG will continue with rehabilitations and closings of landfills but will also step forward in improving the waste sector by constructing new, modern landfills compliant with EU standards that will replace in time most of the currently existing landfills and dumpsites.

The project "Integrated Solid Waste Management System - Kutaisi"

The project "Integrated Solid Waste Management System - Kutaisi" is carried out with the financial support provided by Georgian-German cooperation, KfW, the EU Neighbourhood Investment Facility and the Georgian government. The full investment amounts to 26 million Euro.

The direct beneficiary of the project is the Solid Waste Management Company of Georgia.

The aim of the project (2015-2019) is the construction of a new regional landfill, which will comply with European standards and serve Imereti and Racha-Lechkhumi and Kvemo Svaneti regions and closure of Nikea landfill (and all other existing municipal landfills in the regions) after the new landfill starts operating. The landfill will serve around 700 000 citizens.



This publication has been produced with the assistance of the European Union. Its contents are the sole responsibility of the consortium led by PEM Consult and can in no way be taken to reflect the views of the European Union.

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Section 1: “Law and Order” -

Legal Framework, Strategy and Planning for Waste Management in Georgia

1 Which international Conventions and Agreements are important for the Waste Management System in Georgia?

Georgia is a Party to several main conventions in the field of waste, which set appropriate requirements for its member states and their implementation requires special efforts from the country. These conventions are:

Legal framework for waste management - International conventions

International Conventions signed and ratified by Georgia

- **Basel** – “Convention on the Control of Trans boundary Movements of Hazardous Wastes and Their Disposal” (1999)
- **Stockholm** – “Convention on Persistent Organic Pollutants” (POPs) (2007)
- **Minamata** – “Convention on Mercury”
- **Aarhus** – “Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters” (2001)
- **EU – Georgia Association Agreement AA** (2014)

1. Basel Convention on the Control of trans boundary Movements of Hazardous Wastes and their Disposal

The provisions of the Convention centre on the following principal aims:

- The reduction of hazardous waste generation and the promotion of environmentally sound management of hazardous wastes, wherever the place of disposal;
- The restriction of trans boundary movements of hazardous wastes except where it is perceived to be in accordance with the principles of environmentally sound management; and
- A regulatory system applying to cases where trans boundary movements are permissible.

It basically means that waste can only be exported if the treatment or disposal in the receiving country is at least as good as in the sending country.

http://www.basel.int/Portals/4/Basel%20Convention/docs/convention/bc_glance.pdf

→ Georgia has signed and ratified this Convention and put it into force it in 1999

2. Stockholm Convention on Persistent Organic Pollutants (POP)

The Stockholm Convention on Persistent Organic Pollutants is a global treaty to protect human health and the environment from chemicals that remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissue of humans and wildlife, and have harmful impacts on human health or on the environment. It was adopted in 2001 and entered into force in 2004 and requires its parties to take measures to eliminate or reduce the release of POPs into the environment.

Exposure to Persistent Organic Pollutants (POPs) can lead to serious health effects including certain cancers, birth defects, dysfunctional immune and reproductive systems, greater susceptibility to disease and damages to the central and peripheral nervous systems.

Persistent Organic Pollutants are substances like e.g. DDT (Insecticide used on agricultural crops, primarily cotton, and insects that carry diseases such as malaria and typhus) or Dioxin, which became known worldwide through the Seveso disaster in northern Italy from 1976.

See an overview table of the most relevant POPs under the following link:

<https://www.epa.gov/international-cooperation/persistent-organic-pollutants-global-issue-global-response#table>

Further explanations:

<https://www.epa.gov/international-cooperation/persistent-organic-pollutants-global-issue-global-response>

Text of the Convention:

<http://chm.pops.int/TheConvention/Overview/tabid/3351/Default.aspx>

→ Georgia has signed and ratified this Convention and put it into force in January 2007

3. The Minamata Convention on Mercury

Major highlights of the Minamata Convention include a ban on new mercury mines, the phase-out of existing ones, the phase out and phase down of mercury use in a number of products and processes, control measures on emissions to air and on releases to land and water, and the regulation of the informal sector of artisanal and small-scale gold mining. The Convention also addresses interim storage of mercury and its disposal once it becomes waste, sites contaminated by mercury as well as health issues.

Minamata Convention – ENGLISH:

http://www.mercuryconvention.org/Portals/11/documents/Booklets/Minamata%20Convention%20on%20Mercury_booklet_English.pdf

Minamata Convention – RUSSIAN:

http://www.mercuryconvention.org/Portals/11/documents/Booklets/Minamata%20Convention%20on%20Mercury_booklet_Russian.pdf

→ Georgia has signed but not ratified yet

4. Aarhus Convention

The Aarhus Convention establishes a number of fundamental rights of the public (individuals and their associations) with regard to the environment:

Access to environmental information: Every citizen has the right to receive environmental information that is held by public authorities. Applicants are entitled to obtain this information within one month of the request and without having to say why they require it. In addition, public authorities are obliged, under the Convention, to actively disseminate environmental information in their possession.

Public participation in environmental decision-making: Public authorities have to take measures that enable the public affected and environmental non-governmental organisations to comment on, for example, proposals for projects affecting the environment, or plans and programmes relating to the environment. These comments have to be taken into due account in decision-making, and information and justification on the final decisions have to be provided.

Access to justice: Citizens and NGOs have the right to challenge public decisions that have been made without respecting the two aforementioned rights or environmental law in general.

Detailed and up to date information about the Aarhus Convention is provided on the website of the United Nations Economic Commission for Europe (UNECE):

<http://www.unece.org/env/pp/contentofaarhus.html>

The text of the Aarhus Convention in Georgian:

http://www.unece.org/fileadmin/DAM/env/pp/treaty%20translations/georgian_AC_revi.pdf

The text of the Aarhus Convention in English:

<http://www.unece.org/fileadmin/DAM/env/pp/documents/cep43e.pdf>

→ Georgia has signed and ratified this Convention in 2000 and put it into force in 2001

Reports available on webpage: moe.gov.ge

5. EU Georgia Association Agreement (AA) (2014)

The EU Georgia Association Agreement (AA) was signed in June 2014. The AA is establishing in detail, which measures and provisions of the respective European Council and European Parliament Directives are to be implemented and it sets a detailed timeframe within which each measure has to be implemented.

The main issues / topics referring to waste are presented in Annex XXVI “Environment” of the AA and are resumed under three main topics:

- a) **Waste management:** issues related to waste management are regulated by the Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste.
- b) **Landfills:** Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste as amended by Regulation (EC) No 1882/2003
- c) **Management of waste from extractive industries:** Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries

NOTE: The majority of the provisions referring to waste in the AA have been adopted and integrated in the Georgian national legislation. Key element of this legislation is the “**WASTE MANAGEMENT CODE**” that entered into force on 15 January 2015.

EU Georgia Association Agreement (AA) full text in English:

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:2014:261:FULL&from=EN>

The Association agreement came into force on 27 June 2014

Georgian version <http://www.eu-nato.gov.ge/ge/eu/association-agreement>

2 How is the national legal framework for waste management set up?

The graphic below presents the key documents regulating the waste management on national, regional and local level. The laws and by-laws provide the frame for the implementation of national waste management strategy, the and action plan .



3 What is the Waste Management Code?

The **Waste Management Code** is the overall legal framework for waste and waste management related issues. It was adopted in December 2014 and came into force in January 2015. The Code is based on the principles and approaches envisaged by the EU-Georgia Association Agreement (AA) and best international practices. The Code is addressing in detail all relevant aspects of waste and waste management. It defines and regulates:

- Responsibilities of ministries, public administration, municipalities within the national waste management system
- Details for waste management planning on national level and for municipalities as well as the obligations for companies
- Operation of different types of landfills (hazardous waste, non-hazardous waste, inert waste)
- Different types of waste (Waste classification)
- Keeping record of waste and reporting (Database of waste)
- Fines and penalties for violations related to waste management

Please download original document from here:

<https://matsne.gov.ge/en/document/view/2676416?impose=original>

Further on the Code defines which specific technical details will be regulated in altogether **11 by-laws**:

- a) Classification of Waste according to the types and characteristics of waste
- b) Construction, Operation, Closure and After-care of Landfills Technical Regulations Form and Content of Keeping a Record of Waste and Reporting
- c) Collection and Treatment of Municipal Waste
- d) Procedure and Conditions for the Registration of Collection, Transportation, Pre-treatment and Temporary Storage of Waste
- e) Special Requirements for the Collection and Treatment of Hazardous Waste- Technical Regulations Incineration and Co-incineration of Waste
- f) Healthcare waste management
- g) Animal waste management
- h) The companies waste management plan overview and adoption rules
- i) Procedure for Considering and Coordinating Company Waste Management Plans
- j) Rules of transportation of waste- Technical Regulations

4 What is the “Landfill By-law”?

The ‘Landfill By-law’ is one out of the 11 by-laws stipulated by the waste management code. It is of special importance for the **Solid Waste Management Company of Georgia**. The precise title of the document is:

Resolution of the Government of Georgia № 421 – “Technical Regulation on the Construction, Operation, Closure and After-Care of Landfills”

This Governmental Resolution entered into force on 1 August 2016. The aim of this Technical Regulation on the Construction, Operation, Closure and After-care of Landfills is to prevent or minimize the negative impacts of landfills on environment, on surface water, groundwater, soil and atmospheric air (including greenhouse emissions), and on human health, via establishing strict operation and technical requirements, measures and procedures for waste management of landfills, during the entire lifecycle of a landfill.

Therefore, the Technical Regulation establishes:

- Technical rules and regulations for landfill construction, operation, closure and post closure care.
- Special requirements for existing landfills (that have not been permitted in accordance with the Law of Georgia on Environmental Impact Permit) on bringing the landfills into compliance with the requirements specified in this Technical Regulation.
- Waste acceptance criteria on landfills and procedures and safety requirements for underground disposal of waste (for example in abandoned mines).

Relevance: The ‘landfill bylaw’ is a key document for the major part of the work, which the Solid Waste Management Company of Georgia is doing and provides the legal frame and guidelines for:

- Landfill rehabilitation
- Landfill closure and after care
- Landfill operation
- Construction of new landfills

→ Please download the Georgian version of the landfill by-law from here:

<https://matsne.gov.ge/ka/document/download/2946318/0/ge/pdf>

5 What are the National Waste Management Strategy (NWMS) 2016 – 2030 and the National Waste Management Action Plan (NWMAP) 2016 - 2020

National Waste Management Strategy (WMS) 2016 - 2030



9 Main Topics

1. Legislation
2. Waste Planning
3. Waste Collection and Transport
4. Landfills
5. Prevention, reuse, recycling and recovery
6. Cost recovery
7. Extended Producers Responsibility (EPR)
8. Waste Data
9. Management capacities

- Approved on 1 April 2016
- Is in full accordance with the Waste Management Code and the EU-Georgia Association Agreement
- Covers all legal, technical, administrative, fiscal, human resources and awareness aspects
- Guidance document defining long term objectives and targets

→ **The National Waste Management Strategy (NWMS)** has been prepared in accordance with the Waste Management Code and the EU-Georgia Association Agreement and aims at the development of the Georgian waste management to be in harmony with the European waste management policy. The Strategy is in line with the National Environmental Action Programme of Georgia 2012- 2016 (NEAP) and has taken the recommendations of the Environmental Performance Reviews, Georgia, and UNECE, 2015 into consideration.

The Strategy was approved on 1st of April 2016 and covers a period of 15 years (2016-30). It is considered a 'living document' that might be revised periodically. The Strategy is the frame for the 'National Waste Management Action Plan' (NWMAP), which covers a period of 5 years (2016-2020). A joint format forms the basis for the two integrated documents. The format is annexed to both documents and forms an essential part of the Strategy and the Action Plan (Annex 1).

Both the Strategy and the Action Plan have the same structure. All relevant aspects related to waste and waste management are presented and discussed under the following 9 topics:

1. Legislation
2. Waste Planning
3. Waste Collection and Transport
4. Landfills
5. Prevention, reuse, recycling and recovery
6. Cost recovery
7. Extended Producers Responsibility (EPR)
8. Waste Data
9. Management capacities

The **National Waste Management Strategy** formulates and defines for each of the 9 topics:

→ **Vision** which is giving the overall guidance for formulating the



→ **Objectives** (to meet the vision), which are then providing the frame and the reference to formulate and define the



→ **Targets (to meet the objectives)**

The **National Waste Management Action Plan** then defines in a subsequent and complementary step all the necessary



→ **Actions** that need to be carried out to meet all the targets related to the different objectives and establishes timeframe and deadlines for completing the actions, meeting the targets and reaching the objectives as well as the responsibilities for providing the necessary budgetary allocations.

In accordance to the WM Strategy 8 new regional landfills will be built in Georgia.

6 What are Municipal Waste Management Plans?

Until 31.12.2017 each municipality in Georgia has to develop a waste management plan in compliance with the National Waste Management Action Plan, which is based on a clear view and analysis of the present waste situation and which indicates clear objectives, targets and activities to be implemented and achieved according to a detailed implementation calendar.

The WM plans will set the basis for the regulation of waste collection, separate collection, cleaning activities, fee collection and delivery of residual waste at the landfill. Essential for implementation is a minimum level of understanding of and support for the plan by the population.

Therefore, prior to the adoption of a municipal waste management plan, public discussion involving interested parties and representatives of neighbouring municipalities shall be held. Public discussion shall be carried out by the respective municipality (municipalities).

Article 13 of the waste management code formulates the minimum information a municipal waste management plan must include:

- a) Information on the existing system for collection of waste of the population
- b) Data on the amounts and types of non-hazardous waste collected, recovered and disposed of
- c) Data on the amounts and types of hazardous waste of the population collected, recovered and disposed of
- d) Information on the location of waste treatment facilities
- e) Information on planned measures to be taken for the establishment of separate collection and recovery of municipal waste, including biodegradable waste and packaging waste
- f) Plans for the construction of new waste treatment facilities
- g) Programmes to raise awareness of society on waste management issues
- h) Information on existing and planned measures for cooperation with other municipalities in the field of waste management
- i) Action plan and deadlines for implementation of the activities provided for by the management plan, data on responsible persons, estimated costs and sources for financing

Municipalities can cooperate and even associate in the development and implementation of the waste management plan. In this way equipment can be shared (instead of standing idle half the time), expertise and experience can be shared and even municipal budgets can be shared.

Municipalities can implement all actions in the waste management plan themselves or contract a private company to do it for them (for example waste collection). Obviously, the final responsibility remains with the municipality. Actually, the municipality of Kutaisi has drafted a Waste Management Plan.

7 Can people be punished for littering?

Yes, there are fines for littering. According to the Waste Management Code, which is in force since January 2015, a person who dumps less than 2 kg of waste is fined 80 GEL, from a building 100 GEL and from a car 120 GEL. For 2 kg or more, the fine is 150 GEL. The maximum fine for persons can reach up to 500 GEL and for companies / legal entities up to 1,500 GEL. More details can be found in **Article 31** – “Littering the environment with municipal waste” of the Waste Management Code.

(<https://matsne.gov.ge/en/document/view/2676416?impose=original>)

With a total of 12,915 fines handed out, the state budget saw 1.3 million GEL in the period from January 2015 to January 2016, according to an article published in “Georgia Today”

(<http://georgiatoday.ge/news/4527/Fines-for-Littering-on-the-Up>)

Irregular Behaviour	Fine (GEL)
Littering the environment with municipal waste up to 2 kg.	80
Same action committed from a vehicle (will result in fining a driver of the vehicle and in case of public transport – the violator)	120
Littering the environment with up to five tyres (except bicycle tyres)	Natural person - 150 Legal entity - 500
Littering the environment with up to 2 kg of batteries, accumulators, electric bulbs, electric equipment, graphite electrodes, as well as sharp items, including glass fragments, nails and other similar waste	100
Littering the environment with 2 kg or more of the municipal waste (except for the case determined by paragraph 8 of this Article)	Natural person - 150 Legal entity - 500
Littering the environment with more than 1 m ³ of the municipal waste	Natural person - 300 Legal entity - 1000
Littering the environment (area more than 2 m ²) with bulk waste (including motor vehicles, electric and electronic equipment, construction equipment and other similar equipment)	Natural person - 500 Legal entity - 1500

Section 2: “Who is Who?”

The setup of the Solid Waste Management System in Georgia, involved parties, roles and responsibilities

8 Which are the key responsible political and administrative bodies for waste management?

The following ministries and public administrations are the main responsible bodies for waste management in Georgia:

Waste Management Code - Institutional arrangement
<p>Ministry of Environment and Natural Resource Protection:</p> <ul style="list-style-type: none"> • Development of Waste Management Policy • Regulates trans boundary transportation of waste together with the Ministry of Finance; • Medical waste management together with the Ministry of Labor, Health and Social affairs; • Animal waste management together with the Ministry of Agriculture; • Together with the Ministry of Economy and Sustainable Development issues vehicle permission cards for hazardous waste transportation;
<p>Ministry of Regional Development and Infrastructure</p> <ul style="list-style-type: none"> • Constructs, rehabilitates, closes and operates landfills and transfer stations through the Solid Waste Management Company of Georgia;
<p>Local Self Government Authorities / Municipalities</p> <ul style="list-style-type: none"> • Collection and transportation of municipal waste
<p>Local Government of Tbilisi and Adjara A/R</p> <ul style="list-style-type: none"> • Collection, transportation of Municipal Wastes, as well as Construction, operation, closure and after care of non-hazardous waste landfills

Who is responsible	What for
The Ministry of Environment and Natural Resources Protection	→ is responsible for the development and implementation of the state policy in the field of waste management.
The Solid Waste Management Company of Georgia under the Ministry of Regional Development and Infrastructure of Georgia (MRDI)	→ is responsible for construction, operation, closure and after-care of landfills for non-hazardous waste as well as operation of transfer stations in Georgia except for the landfills in the Autonomous Republic of Adjara and self-governing City of Tbilisi.
The municipalities (59 municipalities and 12 self-governing cities all over Georgia)	→ are responsible for managing the collection, transportation and treatment of municipal waste In the Autonomous Republic of Adjara and in the city of Tbilisi management of non-hazardous waste, construction, operation and closure of landfills is the responsibility of the relevant authorities.
The Ministry of Labour, Health and Social Affairs of Georgia	→ is responsible for the management and control of healthcare waste in cooperation with the MENRP

The Ministry of Agriculture of Georgia	→ regulates and supervises the management of animal waste in cooperation with the MENRP
The Ministry of Economy and Sustainable Development of Georgia	→ defines waste transportation related requirements in cooperation with the MENRP
The Ministry of Finance of Georgia	→ regulates trans boundary movement of waste in cooperation with the MENRP
In addition, the MENRP, Ministry of Internal Affairs of Georgia and municipalities	→ are responsible for controlling the violations in the field of waste management within the scope of their mandate.

9 How is the waste flow regulated?

Waste Flow



According to the existing legislation there are three main actors in the waste flow:

1. Waste producers – Citizens and companies
2. Waste collectors – Municipalities
3. Waste disposer – Solid Waste Management Company of Georgia (entire Georgia except city of Tbilisi and Adjara A/R)

Waste Management Code – Main Parties Involved in Municipal Waste Management

Population / Companies

- Generation of waste

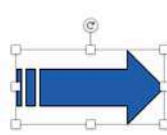


Local self-government authorities

- Collection



- Transportation



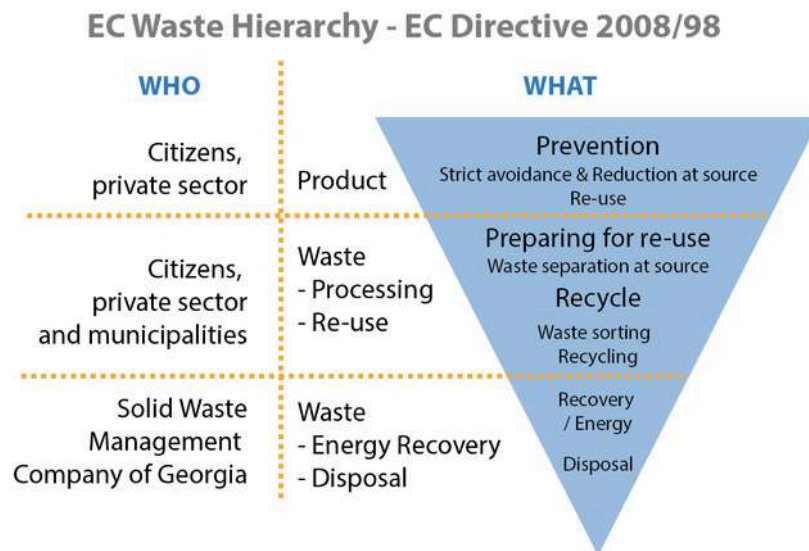
Ministry of Regional Development and Infrastructure/ "Solid waste management company of Georgia" "Tbil-service" "Sanitary Purification Ltd" "Hygiene"

- Landfill management



10 Which responsibilities have citizens and companies?

The consumers and the private sector are at the beginning of the waste flow. They are ‘producers’ of waste. The first and foremost responsibility of citizens and the private sector is to avoid waste. This is the most efficient and effective way to reduce the overall amount of waste generated. The following graphic shows the basic principles "Reduce – Reuse – Recycle" conform the [EC Directive 2008/98 on waste](#):



11 Which responsibilities have companies?

All companies have the responsibility to ensure that the waste they generated is treated and disposed properly and by authorised entities only.

Those companies, who annually produce more than 200 tons of non-hazardous waste or 1,000 tons of inert waste or more than 120 kg of hazardous waste annually, are obliged to develop a waste management plan which will be revised every 3 years.

In the near future, companies that produce or import consumer goods will also be responsible for ensuring proper collection, treatment and disposal - this is the so-called “extended producer responsibility”. This will be implemented for batteries and accumulators, waste oils, packaging waste, Waste from Electric and Electronic Equipment (WEEE or E-waste), tyres and End-of-Life Vehicles (ELV).

12 Which responsibilities have municipalities?

According to the Organic Law of Georgia on **Local Self-Government (2014)** the municipalities are responsible for:

- Collection of household waste;
- Cleaning of the area;
- Transportation of waste and delivery to the official municipal non-hazardous landfills

Furthermore municipalities play a key role in introducing the new system of regional landfills and the future systems of separate waste collection at source for waste separation and recycling. Therefore, the following tasks and activities have to be taken up by municipalities:

- Each municipality needs to elaborate a municipal waste management plan (covering a period of five years). All municipalities must have elaborated a waste management plan until latest end of 2017.
- Gradual introduction of separate collection system for municipal waste starting from 01.02.2019

- Continuous communication activities are necessary in order to inform, educate and involve citizens in waste separation at source
- The real costs for waste collection need to be calculated and efficient waste tariff collection systems need to be put in place

The municipalities will be supported by the Solid Waste Management Company of Georgia. In addition, the consultancy companies that provide technical assistance to the Solid Waste Management Company of Georgia for implementing and constructing the new regional landfills have the obligation to provide support to the municipalities in the respective region. This includes training on elaborating municipal waste management plans as well as support for organising public participation and organising public awareness activities.

The municipality whose territory is littered with waste is entitled to:

- Require the cleaning of such territory from polluter;
- If the polluter cannot be ascertained or reached, the municipality may order the owner of the littered area to clean it (in a reasonable period);
- If a littered area is the property of a municipality it shall care of the clean up of the concerned area itself. (Article 8)

13 Which responsibility has the Solid Waste Management Company of Georgia?

The Solid Waste Management Company of Georgia was established on 24 April 2012 under the Ministry for Infrastructure and Regional Development, which holds 100 % of the company shares. The company has a total of 272 staff (68 in the head office Tbilisi and 204 in the company's 9 regional offices). The company has the following key tasks and responsibilities:

- In a first phase starting from 2012 rehabilitation and operation and/or closing down of 53 former municipal landfills (except the municipality of Tbilisi and the Autonomous Region of Adjara) that have entered into the property of the company in 2013.
- Construction and operation of 8 to 10 new regional landfills.
- In line with the construction and start of operation of new regional landfills all municipal landfills will gradually be closed down or transformed into transfer stations
- Construction and Operation of transfer stations
- Support the municipalities to adapt and improve their waste management services
- Assuring involvement of all regional stakeholders for operating the new systems

So, in a nutshell, the main task of the Solid Waste Management Company of Georgia is to clean up and rehabilitate old existing municipal landfills, to close landfills where necessary, to create transfer stations, to construct new regional landfills and thus, step by step build up a new, modern waste management system following the regional approach, that was successfully implemented in many countries.

Section 3: Waste and Waste Business

Costs, Prices and Financing

14 What Are The Different Types Of Municipal Waste?

The Solid Waste Management Company of Georgia deals in principle only with municipal solid waste. What is that? Officially that is defined in the Georgian legislation in which the European Waste Code has been adopted. This code works with 20 different types of waste, municipal waste has number 20, the last number in the list. For a full overview see: <http://ec.europa.eu/environment/waste/framework/list.htm>.

For common use, municipal waste is split up in a number of groups, often based on what can be done with the waste after collection.



Wet waste, also called “kitchen waste” or “biodegradable waste”

Wet waste consists of kitchen waste - including vegetable and fruit peels and pieces, tea leaves, coffee grounds, eggshells, bones and entrails, fish scales, as well as cooked food (both veg and non-veg) and garden waste but not the wood (trees and branches) part.



Dry waste

Paper, plastics, metal, glass, rubber, thermocol, styrofoam, fabric, leather, rexine, wood (also trees and thick branches) – anything that can be kept for an extended period without decomposing is called dry waste.



Bulky waste

As the word says: big things that don't fit in the normal waste container. This includes fridges, furniture, mattresses,



Household hazardous waste

Household hazardous waste or HHW include two sub-categories:

E-waste such as batteries, computer parts, wires, and electrical equipment of any kind, electrical and electronic toys, remotes, watches, cell phones, bulbs, tube lights and CFLs.

Toxic substances such as paints, cleaning agents, solvents (also your nail polish remover!), pesticides and their containers, other chemicals, medicines.

15 Is there a market for recyclables in Georgia?

YES

There are markets for glass, metal, paper and plastic.

Glass: There is one glass-recycling factory that could easily absorb all glass that could be collected through separate collection in Georgia.

Paper: At present there exist five paper mills in Georgia. Their processing capacity would not be sufficient to absorb all paper that could be collected in Georgia through separate collection. However, there exist companies that are buying collected paper for export, mostly to Turkey.

Plastic: There are two plastic processing plants in Georgia that sort, clean and process collected plastic. One company is collecting and processing polyethylene foils and plastic bags and producing polyethylene foils for packaging. The other company collects plastic bottles (PET) and cleans, sorts and processes them. The gained material (in forms of flakes/ granulate) is exported to Turkey, Romania, Iran and China.

Main conclusion: regardless of the collection or sorting system, at present, all recyclables can be shipped for recycling; either to companies in Georgia or abroad.

16 Is waste business a profitable business?

NO

The overall costs for the integrated system of (separate) collection, transport and disposal are higher than any return and income that can be generated by separately collected and sorted recyclable waste like paper, plastic, glass, metal.

Recycling of recyclable materials can and must be a profitable business by itself. But the profit that can be made from recyclables will never be sufficient for covering the overall waste collection and waste disposal costs.

However, the money that waste recycling companies pay for paper, plastic and glass can contribute to reduce the overall costs and help that citizens have to pay less fees per year. Moreover - for each ton that goes to recycling and that has not to be disposed on a landfill the municipalities don't have to pay gate fee to the landfill operator.

17 Is it cost effective to build regional landfills?

YES

The investments costs for building a landfill are very high. From a technical, operational and logistical point of view there exists a certain optimum range of combinations between these factors which assures minimum costs, i.e. the costs per ton of waste that has to be disposed and the costs for citizens that have to pay fees.

So in practical terms the following factors have to be considered when planning new integrated waste management systems:

- Overall capacity of a landfill (tons of waste over a certain time period)
- Annual quantity of waste produced in a region, the costs for collection
- Average transportation distance and resulting average costs per ton of waste
- Overall annual landfill operational costs
- Costs for closing and maintenance and control after closure

Experience in many western countries has shown, that the concept of less landfills, for bigger regions with higher capacities and lifetime in combination with a network of transfer stations is assuring the most cost effective way of disposing waste with minimum negative impacts on environment.

18 Is it cost effective to build transfer stations and transport waste from there to the regional landfill?

YES

As it is described in the previous paragraph an integrated regional approach for waste management by operating one big Regional landfill for a region(s) instead of 4 or 5 smaller landfills helps minimizing costs. So in the end it is cheaper, i.e. the transportation costs per ton of waste from transfer stations to the regional

landfill are lower than the costs per ton when building a relatively small new landfill according to EU standards.

19 Why Does The Solid Waste Management Company Of Georgia Still Spend Money On Old Landfill Rehabilitation If They Anyway Have To Be Closed Down In Coming Years?

For a transition period lasting until 2025 it is necessary to have operational landfills until the new regional landfills are constructed and start operation. These old landfills need to be rehabilitated as good as possible in order to minimize negative impacts on environment.

Anyway, those works that are carried out for rehabilitating landfills are to a great part the same works that have to be carried out when closing down a landfill. Considering the disastrous state of many landfills that have been taken over by the Solid Waste Management Company of Georgia it was absolutely urgent and necessary to do rehabilitation works for minimizing severe negative impacts on environment.

AND, it is very important to understand: **Closing down landfills costs money!**

Section 4: Now and Then

The transition to a new integrated solid waste management system of regional landfills

20 How many and what type of landfills are actually operated in Georgia?

There are **56 municipal landfills** in total in Georgia. Until 2013, almost all landfills were managed in a bad way, without any plans and did not meet minimum environmental standards.

SWMCG has taken over 53 formerly municipal landfills all over Georgia since 2013 (except City of Tbilisi and Adjara Autonomous Republic) and is administrating them. **The company has rehabilitated 28 municipal landfills and closed 14 in an orderly manner from 2013 to 2016.**

The municipal landfills are at present still the backbone of the waste disposal system in Georgia. This will change in the coming years. New regional landfills will be constructed and most municipal landfills will be closed, some of them will be transformed into transfer stations. Some of them, especially in the northern mountain areas, will remain operational in case of blocked roads in wintertime when transport of waste to the new regional landfills impossible.

However, there exist still a huge number of illegal dumpsites all over Georgia that need to be closed and remediated during the coming years.

Three main actors – 56 landfills, 39 operational



- 56 municipal landfills for household waste are administrated by three administrative bodies
- Solid Waste Management Company of Georgia – 53 landfills in 9 regions
- Municipality of Tbilisi – landfill close to [Lilo](#)
- Autonomous Region of [Adjara](#) – landfills in Batumi and [Kobuleti](#)

21 For what purposes can the area of former landfills be used after closure?

The possible use of closed landfills depends to a good part on how the landfill originally was planned and operated. For systematically planned and operated landfills respecting high environmental standards there exist potentially more possibilities for post closure use. In western countries former landfills are transformed into parks, golf courts, recreational areas or nature reserve areas. For the formerly unregulated landfills, which were taken over by the Solid Waste Management Company, the possibilities are more limited and post-closure use needs to be decided on a case-to-case basis. Most probably trees will surround the majority of the closed landfills and bushes and the area will be green area.

22 Will there be separate collection of waste in Georgia?

YES

The Waste Management Code introduces the Municipal Waste Management Plan (art. 13), including the obligation to plan “measures to be taken for the establishment of separate collection and recovery of municipal waste, including of biodegradable waste and packaging waste”. For biodegradable waste, the start of the draft of a strategy is foreseen for 2019. The gradual introduction and operation of waste collection systems for separate collection of municipal waste is 2019. The National Waste Management Strategy sets 2017 as the date for the draft of the Municipal Waste Management Plans, and 2025 as the date for fully established source separation for paper, metal, glass and plastic and sets recycling targets:

Table 1: Targets for recycling

NWMS targets for recycling ¹	2020	2025	2030
Paper	30 %	50 %	80 %
Glass	20 %	50 %	80 %
Metal	70 %	80 %	90 %
Plastic	30 %	50 %	80 %

1: targets are based on the amount of recyclables in the total waste

No decision has been taken yet on the system of separate collection. Option under consideration are a system of kerbside collection of wet and dry fractions (paper, plastics and metals) with a bring systems for glass collection or bring systems for all recyclables and kerbside collection of residual waste.

23 What does extended producer responsibility mean?

In short: Manufacturers of products are made responsible for the entire life-cycle of the product and especially for the take-back, recycling and final disposal of the packaging as well as of the product after its life cycle, such as:

- Batteries and accumulators
- Waste oils
- Electric and Electronic Equipment (WEEE)
- Tyres
- Vehicles



Tires are an example of products subject to extended producer responsibility in many industrialized countries.



Some typical examples of packaging waste



Electric and electronic waste is another important product segment of extended producer responsibility

The Waste Management Code introduces “extended producer responsibility” (EPR) in Article 9, obliging producers and importers to collectively or individually ensure separate collection, transport, recovery (including recycling) and environmentally sound disposal of waste generated by their products. The waste code does not specify mandatory measures but Art 9, sub 5 determines that this will be done in cooperation with other government authorities and will enter into force on 01. February 2019. In the National Waste

Management Strategy, the deadline for drafting detailed legislation on EPR is also set for 2019 and specific targets are set for 2020, 2025 and 2030.

The waste that has to be managed via EPR are batteries and accumulators, waste oils, packaging waste, Waste from Electric and Electronic Equipment (WEEE), tyres and End-of-Life Vehicles (ELV).

Table 2: Targets for Producer Responsibility Organisations (PRO)

PROs	2020	2025	2030
Packaging waste to be managed	40%	75%	90%
WEEE to be managed	20%	50%	80%

It is not yet decided what system or format the Producer Responsibility Organisations (PROs) are going to take: will they be actively involved in collection from the households/municipalities or act as administrative centres? How will this be “merged” with the separate collection requirement? These choices will impact the amounts of recyclables going to the landfill.

24 Which are the most important milestones for introducing the new waste management system?

Calendar of targets to be reached until 2030 (National Waste Management Strategy 2016 - 20230 and National Waste Management Action Plan 2016 - 2020)

Objective / Target / New measures to be implemented	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
59 municipalities and 12 self-governing cities Municipal Waste Management Plans elaborated	■													
Company Waste Management Plans elaborated			■											
Nationwide Recycling Concept developed			■											
Modalities of cooperation between private and public sector in waste management established				■										
Waste collection and transportation operators competent to meet legal requirements				■										
Collection rate of municipal waste minimum 90%				■										
Collection rate of municipal waste 100 % by									■					
Collection rate of hazardous waste 50 %				■										
Collection rate of hazardous waste 75 %									■					
Collection rate of hazardous waste 100 %														■
Closure of disastrous landfills/ remediation by 2020				■										
Closure of official but unauthorized landfills by 2023							■							
Construction of regional landfills according to EU standards by 2025									■					
Reduce the disposal of biodegradable waste to landfills by 2025									■					
Source separation for paper, glass, metal and plastic established by 2025									■					
Paper recycling 30 % by 2020				■										
Paper recycling 50 % by 2025									■					
Paper recycling 80 % by 2030														■
Glass recycling 20 % by 2020				■										
Glass recycling 50 % by 2025									■					
Glass recycling 80 % by 2030														■
Plastic recycling 30 % by 2020				■										
Plastic recycling 50 % by 2025									■					
Plastic recycling 80 % by 2030														■
Metal recycling 70 % by 2020				■										
Metal recycling 80 % by 2025									■					
Metal recycling 90 % by 2030														■
Full waste management cost recovery from private sector by 2025									■					■
Full waste management cost recovery from population by 2030														■

Section 5: New regional landfills

Planned modern sanitary landfills; environmental protection measures

25 How many regional landfills are planned for Georgia?

At present there are planned up to **7 regional landfills that will be operated by the Solid Waste Management Company of Georgia (SWMCG) and that will serve** 54 municipalities and 11 self-governing cities. One more regional landfill is at present being constructed at the territory of Adjara A/R, and will serve the Adjara region and probably will serve Guria region as well.. Tbilisi is at present developing plans to improve its waste management collection system, to introduce separate collection and to improve the situation of the main landfill used for waste disposal (near Lilo).

The new national waste management system of regional landfills and connected networks of transfer stations that will be implemented by SWMCG serves over 60 % of the Georgian population, about 2,3 million citizens. The municipality of Tbilisi and the Autonomous Region of Adjara are not part of this new system and are providing under their responsibility waste collection and waste disposal for about 1,4 million citizens, which represent nearly 40 % of the population.

Landfills planned by the Solid Waste Management Company of Georgia

1- Imereti and Racha-Lechkhumi and Kvemo Svaneti



- Donor: KfW
- Budget: 26 mio Euro
- Implementation period: 2015 - 2019
- 16 Municipalities involved: Kutaisi, Baghdati, Tskaltubo, kharagauli, Vani, Samtredia, Zestaponi, Terjola, Sachkhere, Chiatura, Tkibuli, Khoni, Oni, Ambrolauri, Tsageri, Lentekhi.
- Current status: Feasibility study carried out. Selected consultants contracted. Location under discussion. Project implementation started in 2015. Beginning of construction in 2017

2- Kvemo Kartli



- Donor: EBRD
- Budget: 11.5 mio Euros
- Implementation period: 2015 – 2019
- 5 Municipalities involved: Tsalka, Dmanisi, Tetrtskaro, Marneuli, Bolnisi
- Current status: Feasibility study carried out. Selected consultants contracted. Location under discussion. Project implementation started in 2016. Beginning of construction in 2017

3 - Samegrelo-Zemo Svaneti



- Donor: KfW
- Budget: 38 mio Euros (NOTE: This landfill is financed under one single loan agreement of KfW together with the landfill planned for Kakheti)
- Possible implementation period: 2016-2020
- 7 Municipalities involved: Mestia, Zugdidi, Senaki, Chkhorotsku, Tsalenjikha, Khobi, Poti
- Current status: Feasibility study. Project start possibly 2017

4 - Kakheti



- Donor: KfW
- Budget: 38 mio Euros (NOTE: This landfill is financed under one single loan agreement of KfW together with the landfill planned for Samegrelo-Zemo Svaneti)
- Possible implementation period: 2016-2020
- 7 Municipalities involved: Akhmeta, Gurjaani, Dedoplistskaro, Telavi, Lagodekhi, Signaghi, Kvareli
- Current status: feasibility study. Project start possibly 2017

5 - Mtskheta-Mtianeti



- Current status: on-going negotiations with International Financing Institutions (IFIs)

6 - Shida Kartli



- Current status: on-going negotiations with International Financing Institutions (IFIs)

7 - Samtskhe-Javakheti



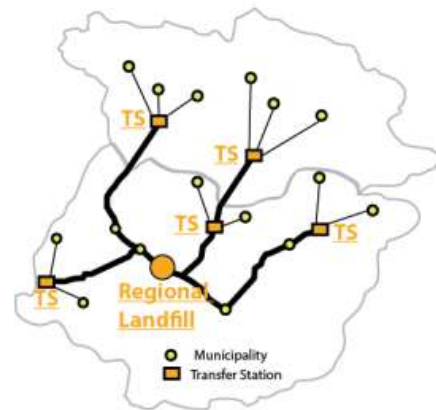
- Current status: the Sanitary landfill of Borjomi has been rehabilitated in 2014 with a Budget of 1.2 mio Euros (funded by the Dutch Government). The final decision whether the Borjomi landfill is sufficient for the whole region or whether additional landfill capacities are needed has not been decided yet.

26 How does a regional landfill function?

Regional landfills are big landfills that serve a population living in the region, there are several hundred thousands of citizens. Landfills are located relatively close to big cities where big quantities of waste are produced. Remote municipalities are connected to regional landfill through systems of transfer stations.

Regional landfills will assure in future a fully integrated solid waste management system in Georgia. Organising municipal household waste flows in this way has been implemented successfully all over the world. The system has two main advantages:

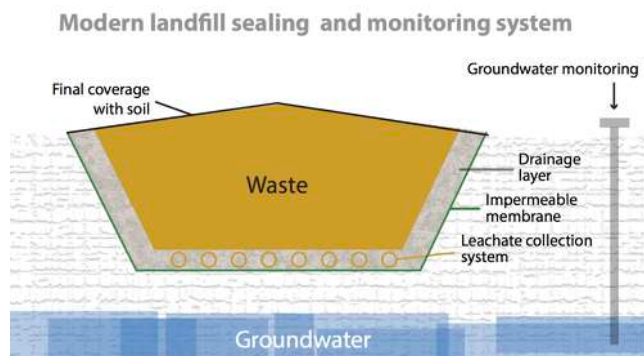
- Construction of a smaller number of big landfills with full protection of the environment reduces the overall investment costs as well as the running operational costs
- Involvement of a greater number of municipalities using similar systems of waste collection and disposal makes it easier to introduce waste recycling systems on a large scale



This graphic shows the network of transfer stations for the planned regional landfill near Kutaisi.

27 Does a modern landfill pollute groundwater?

NO! Why? – The landfill is like a bathtub, absolutely impermeable with controlled outflow. The outflowing leachate is collected in a sealed, impermeable basin and is then cleaned through a highly efficient cleaning technology called ‘reverse osmosis’. Reverse Osmosis is the best available technology and state of the art and is used on a broad scale worldwide.



Collection of leachate in a sealed pond



All occurring leachate of the landfill is drained through the drainage system installed under the landfill and then collected in a

Processing of leachate in a reverse osmosis treatment station



Modern reverse osmosis treatment stations can extract 70 litres clean water out of 100 litres leachate. The remaining 30 litres

Clean water after reverse osmosis treatment



The reverse osmosis treatment is highly effective and cleans the water from toxic substances.

leachate pond.

are disposed back on the landfill

28 Which measures assure that groundwater is not polluted?

The technology nowadays used for constructing the sealing layers and installing the leachate drainage systems on the ground level of a landfill are tested and proved now for decades in many countries.

Shape and compact the landfill basin



The ground is excavated and heavily compacted. Two clay layers build the base of the sealing system. Exact inclination assures flow of leachate to the collection points

Complete coverage of the landfill basin with foil



Impermeable foil (technical term: "HDPE Geomembrane") is covering completely the ground basin of the landfill

Weld and check



Experienced and skilled workers weld the foil pieces together to one single piece. All welding seams are checked and proofed with air pressure.

Protective membrane plus 50 cm gravel layer



A highly protective white foil (technically: 'Geotextile') is covering the impermeable Geomembrane and is then covered with a 50 cm layer of gravel. This assures leachate flowing to the drain and collection pipes.

Leachate drain pipes under gravel in sand bed



These drain and collection pipes are put in sand bed and then covered with gravel. Leachate flows to the outflow point through natural gravity.

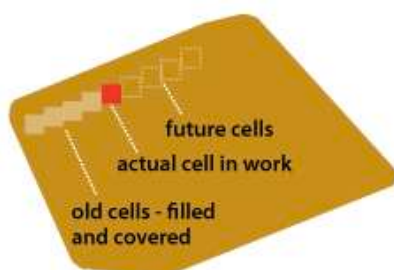
Leachate outflow pipe carefully welded into foil



The outflow connection pipes are tightly welded into the impermeable fill. They are the outflow of the 'big bathtub'.

29 Do modern landfills smell?

Depositing of waste follows a strict and systematic plan and **the cell** is the key element of the filling plan. The "cell" is practically the place where waste is disposed from the trucks, piled up with a caterpillar, compacted with a special compactor and then **covered with soil on a daily basis**. Only where the actual cell is, waste can be seen. All the other area, the previous cells, is safely covered with soil. Development of smell is therefore reduced to a very low level that usually will not disturb people outside the landfill.



Depending on the amount of waste delivered daily, the cell will be filled up (2 to 3 m high) during a certain period (50 to 100 days) and then sealed with additional final strata of soil and plants. Then a new cell will be started in direct continuation of the filled up cell.

Section 6: New regional landfill Imereti and Racha-Lechkhumi and Kvemo Svaneti

30 What is the project “Integrated Solid Waste Management System Kutaisi” about?



The project was developed and is currently being implemented within the bilateral **German-Georgian cooperation** agreement with support of a credit provided by **KfW**, contributions by the Government of Georgia and a grant provided through the EU Neighbourhood Investment Facility (NIF)



The European Union
for Georgia
EU NIF: Support to Investment



- **Project results:** the construction of a new regional landfill in compliance with EU standards with a network of connected transfer stations, the closure of the Nikea landfill in Kutaisi and the introduction of an integrated waste management system by supporting and enhancing the capacities of all involved parties (SWMCG, municipalities, citizens and stakeholders)
- **Project duration:** 2015-2019
- **Target region:** The new landfill will serve the Imereti and the Racha-Lechkhumi / Kvemo Svaneti regions
- **Project beneficiaries:** Solid Waste Management Company of Georgia, 16 municipalities, 700 000 citizens
- **Total investment:** 26 mio Euro

31 Who is constructing and operating the new landfill?



LTD SOLID WASTE MANAGEMENT
COMPANY OF GEORGIA



Construction and Operation

The **Solid Waste Management Company of Georgia** is the direct beneficiary. The landfill is planned and constructed on behalf of the company and will be operated by it after construction. The landfill for Imereti and Racha Lechkhumi/Kvemo Svaneti is the FIRST regional landfill that will be constructed. SWMCG has the following tasks and responsibilities in the project:

- Work with international consulting companies for the design, the construction supervision and the overall operation of the company
- Contracting construction companies
- Supervision of construction works
- Final approval and reception of construction
- Owner and operator of the new landfill

32 Who is providing technical assistance?



The "Implementation Consultant"

The consulting company **ERM (Environmental Resources Management)** delivers consulting services for planning, tendering and supervising the construction of the new sanitary landfill and the transfer stations including the long distance transport equipment. Main tasks and responsibilities:

- Design of the sanitary landfill
- EISA study (Environmental and Social Impact Assessment)
- Prepare tender dossiers for construction works and equipment and supporting tender procedures
- Supervise construction works

This project is financed within the bilateral German-Georgian Cooperation Programme (€ 20 mio loan to the Georgian State)



The "Accompanying Measures Consultant"

This project component is financed by a grant provided by the EU through the Neighbourhood Investment Facility (NIF) and implemented by the German consultancy company PEM Consult together with INTECUS GmbH (Germany) and GAMMA (Georgia). It delivers training and consulting services to support and improve the organisational and institutional capacities of the Solid Waste Management Company. Its main tasks and responsibilities are to support and improve the capacities of the Solid Waste Management Company of Georgia in the following fields:

- Organisation and management
- Financial management
- Technical competences
- PR, communication and public awareness activities.



33 Who is financing the new landfill?



German-Georgian Cooperation, KfW

Within the bilateral German-Georgian Cooperation Programme, the **KfW** provides a € 20 mio loan to the Georgian State.



Government of Georgia

The **Government of Georgia** contributes with € 4 mio to the total costs of € 26 mio.



EU Neighbourhood Investment Fund

The European Union provides through its **EU Neighbourhood Investment Fund** a € 2 mio grant for financing the technical assistance project "Accompanying Measures Consulting".

34 Who is benefitting from the new landfill?

There are 16 municipalities of the regions Imereti and Racha-Lechkhumi and Kvemo Svaneti in which are living about 700 000 citizens who will be the final beneficiaries of the new integrated waste management system.

16 municipalities in the regions Imereti, Racha-Lechkhumi and Kvemo Svaneti



For more information:

For more information on solid waste management please contact the Solid Waste Management Company of Georgia and visit also the company's website www.waste.gov.ge

Contact:

Solid Waste Management Company of Georgia

10 Politkovskaia Street

Tbilisi

Georgia

Phone: +995 - 32 - 243 88 30

E-Mail: info@waste.gov.ge

www.waste.gov.ge

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