Some Topical Issues Related to Planning and Management of Landfills

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Summary

Disposal of waste on landfills is the most widespread practice of waste management in Georgia and this tendency will most likely be maintained for at least the following decade. According to official information, presently there are 63 officially registered ‘managed’ municipal landfills in Georgia, however, due to poor waste collection and disposal services, there are also numerous landfills/dumpsites that were spontaneously established almost near all small or medium-size settlements. Virtually all landfills (except few new ones) heavily pollute environment and pose a threat to human health due to poor design and management. According to a widespread opinion, the lifespan of current landfills is limited and will be over in several years. Therefore, many Georgian municipalities are trying to find areas and resources for building new landfills. This policy brief outlines some of the topical issues of policy and legal framework related to operation and closure of existing landfills and building of new ones, identifies shortcomings and proposes solutions.

1. Context and importance of the problem

In Georgia, waste management was one of the most neglected sectors until recently and it still needs important reforms today. In Georgia there is no state strategy and action plan on waste management, to say nothing about regional or local strategies and plans. The country has no framework law on waste management, which would define the types of waste, instruments of their management, the agencies responsible for management, while current legislation in the field of waste management is very fragmented and ineffective. As for the agencies involved in waste management, the Ministry of Environment Protection lacks capacity to develop and adopt strategic documents in the sphere of waste management, while local self-government bodies have no capacities to properly manage local waste at a local level. As far as the waste management forms are concerned, disposal of waste on landfills remains the major form of waste management in Georgia. At the same time, landfills are not poorly organized and represent a constant source of pollution.

The situation in the waste management sphere is not favorable. However, certain steps were taken during past years to improve the situation. For example, although with certain shortcomings, an inventory of municipal, medical and industrial waste was carried out. New sanitary landfills were built in Rustavi and Tbilisi; a new sanitary landfill is planned to be established in Adjara Autonomous Republic. A number of campaigns were held on initiative of governmental, local self-government and non-governmental organizations to increase public awareness about proper treatment of municipal waste (these campaigns also included the so called “cleaning campaign”). Some municipalities (mostly those, which are trying to attract tourists) managed to strengthen the system of waste collection and disposal through mobilizing their own budgets or with international aid.

Although separate cases of recycling of certain fractions of waste have already been observed in Georgia, waste disposal on landfills, as already mentioned above, still remains the most widespread practice and it is most likely that this tendency will be maintained for, at least, the following decade. According to a widespread opinion, the lifetime of current landfills is limited and will be over in several years. As practice shows, this opinion is not groundless because not a single Georgian municipality tries to find a territory and resources for building new landfills.
In this policy brief we will try to outline some topical issues of policy and legal framework related to operation, closure and building of new landfills, to identify existing shortcomings and propose solutions.

2. Landfills – current situation

Today Georgia is taking certain steps to settle the problem of waste collection and disposal. However, due to uncontrolled waste disposal, the problem of environmental pollution is still extremely pressing. Pollution of natural landscapes, forests, fields, ravines, surface waters (including the Black Sea coastal line) with scattered or uncontrolled municipal (frequently mixed) waste is especially obvious. Such situation is alarming from both aesthetic and economic points of view (it causes bad smell, littered landscape and objects of nature lose their attractiveness, including in terms of tourism). Moreover, accumulated waste represents a source of anti-sanitary and creates a danger of spread of diseases and parasites. Frequently, domestic and wild animals, poultry and fish eat this waste that causes their intoxication or diseases, or concentration of undesirable substances in their tissues.

The key reason of pollution of the environment with uncontrolled or compiled municipal waste is the collapse of the system of waste collection. Traditionally, this activity is carried out by relevant services of local municipality. In order to increase the quality of public service, all the municipalities have outsourced this service – state, municipal or private enterprises have been set up on the basis of the existing material-technical means, responsible for collection and disposal of municipal waste. However, because of extremely outdated material-technical base, as well as ineffective management and inadequate financing, the quality of service is quite low. Regular collection and disposal of waste was completely ceased in many settlements (especially in villages). The population was obliged to resort to “self-service”: small landfills (dumpsites) started to emerge in the nearby ravines, roadsides and river banks.

The situation in respect of municipal waste collection started to improve in the country from 2006-2007, when the Tbilisi government recognized the issue of ensuring the cleanness in the capital as a priority. From 2008 other municipalities also launched similar processes. However, because of lack of finances, the waste collection service has not resumed and waste is still thrown in the nearby ravines or roadsides (sometimes, even the waste collection companies apply to this practice to save money on transport costs).

As for the landfills, presently there are 63 officially registered municipal landfills in Georgia. In order to imagine more or less full picture about the number of landfills, it is necessary to add to the number of registered landfills those spontaneously established landfills, which can be observed almost near all small or medium-size settlements. None of 63 officially registered municipal landfills have the system of collection and treatment of the leachate, or even waterproof basement, which would have protected groundwater against leaking of polluted water. Moreover, a great part of landfills is located on the river banks or ravines; it actually causes irreversible pollution of surface waters from these landfills. No monitoring of pollution from leaked waters is conducted. Apparently, they are polluted with both harmful organic substances and heavy metals, and probably with pathogenic microorganisms.

Virtually all landfills violate the operation requirements – no timely and regular ramming-covering-damping is taking place to avoid self-ignition of decomposed waste. As a result, a low-temperature open burning of waste is spontaneously taking place at almost all, more or less large landfills that causes release of extremely harmful pollutants, dioxins and furans into the atmosphere. The air pollution disturbs local population because of its terrible smell and, what is most important, it causes harm to their health. Moreover, persistent organic pollutants from open burning of municipal waste remain in the atmosphere for a long time; they are dispersed by atmospheric flows far away, thus contributing to the atmospheric pollution of the entire planet. One of the most alarming sources of environmental pollution from municipal waste landfills is industrial, medical and veterinary waste, which is frequently placed on the municipal landfills without any prior treatment (in Georgia there is no landfill for hazardous waste).

Almost all officially registered landfills in Georgia were arranged during the Soviet period and their construction is in line with the norms acting in that period as well as regular practice of neglecting those norms. The 1996 Law on Environmental Permit was exempting all old enterprises (including landfills) from carrying out the environmental impact assessment as well as from the obligation to obtain an environmental permit. Furthermore, no law was adopted which would have

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2 Ibid.
3 Ibid.
4 Ibid.
5 Ibid.
6 Ibid.
obliged the so called “old” enterprises to conduct an environmental audit and to implement mitigation measures. As a result, polluters, including landfills, were given an opportunity to continue their existence endlessly.

In 2007 the Parliament of Georgia adopted the Law on Environmental Impact Permit (which replaced the Law on Environmental Permit), which obliged “old” enterprises, including the operators of “old” landfills, to conduct an environmental audit of the facility before January 1, 2010, to develop a plan of measures on mitigation of environmental impacts and obtain an environmental impact permit on this basis. However, not a single landfill operator has implemented such measures so far. Respectively, since the 1st of January, 2010, all landfills existing in Georgia have been operating without permits, thus violating the law. According to the available information, no enforcement measures have been taken in respect of any such violations.

Some municipalities suppose that the municipal landfills used by them should be closed and respectively, they plan to build new, modern landfills. Tbilisi, Rustavi, Batumi municipalities, as well as Dedoplistskaro and Kvareli municipalities have already obtained permits for operating of new landfills. Along with arranging new landfills, the process of closing the old ones is currently underway. However, in all cases, these projects are implemented with using obscure legal framework and practice.

3. Policy and legal framework
Waste management is closely interlinked with environmental, social and economic spheres, thus representing one of the central issues of sustainable development. In terms of introducing sustainable waste management policy, Georgia stays at an early stage of development of this sphere. The existing tendencies are far from the sustainable waste management principles and are basically limited by traditional approaches. Strategic approach to the waste is crucial for complex solution of the issues related to waste management and introduction of sustainable waste management. Waste management strategy creates the foundation for regulation of the sphere that should further be developed in the legislation.

Development of framework legislation and key procedures for waste management, as well as waste management planning is one of the commitments undertaken by Georgia under the EU-Georgia Action Plan of the European Neighborhood Policy adopted by the end of 2006. However, actually no steps have been taken in this direction.

In Georgia there is no national strategy for waste management so far. No priorities and goals for waste management are determined either. Absence of priorities leads to fragmented legislation, because legislation is developed not for the implementation of strategic goals and priorities, but for particular needs and is frequently tailored to the existing reality. As we have already mentioned above, there is no framework law on waste in Georgia so far.

As already mentioned above, placement of waste on landfills remains the only form of waste management in Georgia. Until now, the sphere is regulated by order No 36/in dated February 24, 2003 of the Minister of Labor, Health and Social Affairs “On approval of the sanitary rules and norms for arrangement and operation of municipal solid waste landfills.” It can be said that the document does not establish environmental requirements, but is oriented to technical-economic conditions and sanitary-hygienic practice of landfills. The document does not focus on those issues, which are important for the arrangement of modern sanitary landfills. It does not indicate the requirements and concrete means of waste treatment and safe disposal, arrangement of drainage system, avoidance of water and air pollution; a certain tendency is observed in favor of traditional, unsustainable methods of waste management; procedures of landfill control and monitoring are not clearly defined; no controlling bodies and their functions are specified.

Besides the above mentioned act, the issues of waste disposal are regulated by the Law on Environmental Impact Permit dated December 14, 2007 (earlier, it was regulated by the Law on Environmental Permit). According to the law, waste-related activities need environmental impact permits. In particular, if a person

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7  Ibid.
8  Green Alternative, 2006. Environmental governance in Georgia and how the EU can contribute to strengthening. Available at: www.greenalt.org
9  It should be noted that according to the National Program on Harmonization, Georgia has committed itself to approximate its legislation with several EU directives on waste management, including Landfill Directive. The directive sets minimum requirements to restrict the landfilling of certain waste streams, as well as legal requirements for landfills and requirements for landfill licensing, treatment, closure and after-care procedures.
10  During last years there were some attempts to develop such document, though they failed. This time, it is planned to start elaboration of waste management strategy with the financial support of the European Union under the Twinning project.
11  Green Alternative, 2006. Environmental governance in Georgia and how the EU can contribute to strengthening. Available at: www.greenalt.org
plans to recycle solid municipal waste (including to construct waste incineration plants), to arrange landfills, to dispose toxic and other hazardous waste, to arrange waste burial sites, to recycle and treat waste, he/she is obliged to prepare an Environmental Impact Assessment report and submit it to the Ministry of Environment Protection in order to obtain the right (environmental impact permit or conclusion of ecological expertise) to commence the activities.

As already mentioned above, this law (unlike the Law on Environmental Permit) concerns not only the planned activities, but also those, the implementation of which started before the enactment of the Law on Environmental Permit - in this particular case, it concerns the landfills operating before the enactment of the law. The law obliged the operators of all acting landfills to conduct an environmental audit of the facility before January 1, 2010, to develop a plan of mitigation measures and to obtain an Environmental Impact Permit.

As for the distribution of competences in waste management, the picture is quite obscure, because there is no law on waste in Georgia so far. Based on separate norms of the legislation, the following picture can be drawn:

The Ministry of Environment Protection is the leading state institution of waste management system. The Ministry defines state policy in the sphere of waste; it carries out state control over import, export, re-export, transit, recycling, utilization, treatment, storage and burial of industrial, municipal, radioactive, toxic and other hazardous waste; issues permits on waste recycling, treatment and disposal. Moreover, it is the prerogative of the Ministry of Labor, Health and Social Affairs to carry out state sanitary supervision and hygienic control, to develop and control anti-epidemic measures.

As for the authorities of the local self-government bodies in waste management, they are defined by the Organic Law of Georgia on Local Self-Government Bodies dated December 16, 2005. According to the law, exclusive authorities of self-governing units are: cleaning of the streets in settlements, arrangement/operation of landfills, planning and implementation of collection and treatment of municipal waste or conducting municipal purchases for their implementation. It should be noted that initially the arrangement/operation of landfills was not an exclusive authority of local self-governing units. This authority was added to self-governing units as a result of amendments to the law approved on December 28, 2009.

And finally, while talking about the policy and legal framework existing in waste management, we cannot neglect two documents developed during past years. The first is the State Strategy for Regional Development of Georgia for 2010-2017 developed under the aegis of the Ministry of Regional Development and Infrastructure of Georgia and approved by the Georgian Government on June 25, 2010, and the second one, the Concept on Municipal Solid Waste Management in Georgia developed by the Ministry of Environment Protection. Those two documents are briefly discussed below.


“3.3. Municipal Waste Management
1. A relevant draft legal act should be elaborated in order to regulate the waste management sector, define adequate standards and distribute authorities amongst different institutions. Moreover, a package of normative acts should be elaborated in order to determine municipal standards and improve the quality of service in this sphere.
2. The commercialization of waste management should be encouraged which will support the solving of problems existing in this sector.
3. A standard methodology for the calculation of municipal service costs should be developed considering best practice and geographic location.
4. Both state and local self-government entities should encourage the introduction of waste separation systems bearing in mind the risk of spreading infections or polluting the environment whilst transporting and depositing all types of waste together”.

It is clear from the above abstract that diversion of certain waste streams from landfills should be encouraged (paragraph 4). It should also be noted that before developing the strategy, in 2010 the Georgian Regional Development Commission prepared “Strategy Recommendations for Regional Development in Georgia for 2011-2017”, which also contained the list of measures to be implemented in waste management. The list contained quite detailed recommendations about arrangement of landfills, which, unfortunately, were not ultimately reflected in the government-approved strategy. Nevertheless, since the document (recommendations) represents the result of a joint work by all stakeholders and expresses an agreed position, below an extract from this document is presented:

4.4.4. Municipal waste management: management of landfills

The Georgian Ministry of Environment Protection and Natural Resources should elaborate new technical regulations for arranging landfills in compliance with the EU directives.

Waste separation system should be introduced in the country together with initiating the activities for improving the situation on landfill sites by both the state and local municipalities since transporting and dumping all sorts of waste together is a hazardous practice (in terms of spreading infections or polluting the environment).

The Georgian Government is recommended to elaborate a strategy and an action plan for arranging landfills in the country, since not a single self-governing unit is able to cope with this problem independently.

Self-governing units need to draft long-term (at least a ten-year period) and short-term plans for waste management (collection, transportation, disposal), by envisaging such aspects as avoiding the piling up of rubbish, treatment of leachate from landfills, proper management of medical, construction and other types of waste:

- Prior to constructing new landfills, existing landfill sites must be properly maintained;
- Illegal landfills must be closed;
- Waste collection must become containerized whilst closing rubbish bins”.

The second document - Concept on Municipal Solid Waste Management in Georgia – was also developed in 2010. It describes the situation existing in the sphere of solid municipal waste, the problems identified and the measures to be implemented within the next five years. Although the legal status of the concept is unclear (it was not approved officially), for the purposes of this policy brief, it is essential to mention some provisions concerning the landfills.

For example, the concept dedicates one chapter to the issues of planning and arranging new landfills in Georgia. Below there is a relevant extract from this document:

“Planning and Arranging New Landfills in Georgia

The Ministry of Environment Protection and Natural Resources of Georgia has identified the areas for arrangement of new landfills by Georgian cities, regions and large settlement, giving due consideration to service areas and priorities in view of central planning and regional approaches.

Based on environmental requirements and economic assessments, as well as taking international experience into consideration, it is expedient to arrange central landfills in the country, which will serve the major part of the Georgian population. A number of regions and settlements, where it is not economically feasible to arrange landfills (projecting costs, construction costs, exploitation costs, closure costs), should contact the central landfills through waste-transporting stations and transportation means. Taking into consideration the geographical location and climatic conditions of some settlements and areas, it is essential to develop individual approaches in terms of municipal waste management that should be made on the basis of further assessments”.

The annex to the Concept provides a scheme of arranging 31 central landfills throughout the country (excluding Abkhazia and South Ossetia) giving due consideration to service areas, priorities and apparent timeframes.

As for the so called managed landfills and spontaneously originated landfills, the Concept covers these issues too and lists the following necessary measures: closure of illegal landfills and cleaning up the sites; safe conservation and closure of old overfilled landfills located in ecologically hazardous areas; improvement of the situation at other operating landfills in order to use them at a transitional stage.

4. Current problems and proposed solutions

4.1 Selection of sites for new landfills

As already mentioned above, presently the decisions about establishing new landfills have already been made in respect of Tbilisi, Rustavi, Batumi municipalities, as well as Dedoplistskaro and Kvareli municipalities. The issue of arranging a municipal waste landfill in a settlement of Chakvi, Adjara, is also being discussed. It should be noted that almost in all the cases the issue of selecting a new landfill site was quite problematic; the projects came across significant opposition on the part of the communities affected by the planned landfills. Insufficient exploration of the alternative landfill sites as well as poor and/or delayed consultations with the affected communities at a later stage can be considered as a significant shortcoming in the process of landfills planning.
To eradicate this problem, first and foremost, it is urgent to improve the existing system of Environmental Impact Assessment (the system of granting the Environmental Impact Permit) so that to enable early consultations with the local communities likely to be affected by the planned projects. This, in its turn, requires legal formalization of a scoping stage and detailed procedures for public participation with further implementation of these procedures.

It is noteworthy that as already mentioned in the previous chapter, 31 landfills are planned to be arranged throughout the country; thus, for proper implementation of the process of selecting planned landfill sites, it would be an important step to conduct Strategic Environmental Assessment (SEA) for the scheme of arranging central landfills. Such approach will help save resources while conducting Environmental Impact Assessment of each landfill in future, as well as achieve consensus with the public and especially with the landfill-affected communities about possible landfill sites.

Simultaneously, it is also important to adopt the guidelines for selecting new landfills sites. The existence of such guidelines would help landfill project planners, as well as assist the permitting authorities. According to the available information, such document has already been prepared with the assistance of one of the donors and with the participation of the Ministry of Environment Protection, though it has not been approved officially so far. Since the document has not been available to the public and, respectively, it has not been the subject of discussion, it is difficult to judge about the comprehensiveness of this document. Proceeding from the seriousness of the issue, it is essential to revise and finalize the document in a shortest period of time (if necessary). In order to grant a legal status to the document, it may be approved as a statute or technical regulation (generally binding rule).

4.2 Waste that should not be disposed on municipal waste landfills
The fact that the parties involved in waste management are thinking of using various approaches towards different streams of waste can only be welcomed. But if timely steps are not taken in this direction, there is a huge risk that after a certain period of time industrial, construction, medical, biological or other types of waste will again appear on new sanitary landfills.

To avoid this risk the country must adopt a framework law on waste as an urgent measure to be implemented at a legislative level. The list of practical measures includes the establishment of relevant infrastructure for collection, treatment and disposal of other fractions of waste (other than municipal waste). We think that this process would be much promoted by the elaboration of the same concept/concepts by the Ministry of Environment Protection as developed in case of municipal waste, and by holding broad consultations on the document/documents.

4.3 Operating “managed” landfills
As already mentioned above, the Law on Environmental Impact Permit obliged the operators of “old” landfills to conduct an environmental audit of the facility before January 1, 2010, to develop a plan of mitigation measures and obtain an Environmental Impact Permit on this basis. However, not a single landfill operator has implemented such measures so far. Respectively, since the 1st of January, 2010, all landfills existing in Georgia have been operating without permits, thus violating the law. According to the available information, no enforcement measures have been taken in respect of any such violation that also is unlawful.

As it seems, “to improve the situation” the Ministry of Environment Protection has developed draft amendments to the Law on Environmental Impact Permit, envisaging the postponement of the obligation on obtaining an environmental impact permit “for non-hazardous waste landfills” operating before the enactment of the law, until January 1, 2014. The Parliament adopted this draft law initiated by the Ministry of Environment Protection on March 22, 2011.

The following issues remain unclear in terms of postponement of the obligation on obtaining an Environmental Impact Permit:

1. Which particular landfills fall under the new norm? – the current waste management legislation does not recognize a concept “non-hazardous waste landfill”; thus, the question arises, whether all officially registered landfills (63) can belong to the category of “non-hazardous waste landfills” and whether we should require all of them to fulfill this legal norm, or maybe this norm applies only to a part of the registered landfills. In such case, it means that the remained part has been operating illegally for already a long time.

Moreover, owing to such obscure formulation, the number of landfills may also include both officially registered 63 landfills and those “unregistered”

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13 According to one of the requirements of the Aarhus Convention, the public concerned shall be informed, either by public notice or individually as appropriate, early in an environmental decision-making procedure, and in an adequate, timely and effective manner.
spontaneous landfills, which are operating throughout the country. We should not also rule out the following situation – probably all the 63 “managed” landfills will obtain environmental impact permits (to further aggravate the situation, let us assume that both “managed” and spontaneously created landfills managed to obtain permits) – what will happen then? How does such situation comply with the concept on municipal waste management developed by the Ministry of Environment Protection and the plans of opening 31 new central landfills?

2. Why was the deadline set for January 1, 2014 and what should happen before January 1, 2014? – We have certain grounds to suppose that no research has been conducted in respect of postponement of the obligation on obtaining an environmental impact permit; in this case, what is the offered deadline based on? The conditions, which will provide and assist landfill operators to conduct relevant researches and obtain environmental impact permits before January 1, 2014, are unknown so far. It is a well-known fact that the local governments have limited resources to fulfill such obligations; thus, a question arises whether there is a guarantee that they will manage to fulfill these obligations before January 1, 2014. In our opinion, such amendments will temporarily mitigate the “burden” of enforcement authorities and in fact, there is a huge probability that this obligation will not also be fulfilled before January 1, 2014.

Since the legislative amendment initiated by the Ministry of Environment Protection has already come into effect, we think that at this stage it is important that the postponement of obligations is certainly followed by the definition of an exact list of those landfills, which fall under this legal norm (obligation on obtaining environmental impact permit is meant). Moreover, it is important to determine a list of compulsory measures (and to allocate relevant financial resources), which will help self-governing units to meet the requirements of the law before January 1, 2014.

And finally, the following cases should also be taken into consideration – a research conducted with the purpose of obtaining a permit may reveal that a landfill can no more receive the waste (as its lifetime is over) and mitigation measures have no sense. It is unclear how a landfill operator and/or a self-governing body should act in such case.

4.4 Landfill closure
The concept mentioned in the previous chapter envisages the closure of “illegal landfills” and “old overfilled landfills located on ecologically hazardous territories”. However, it should be noted that in Georgia there is no legal framework to regulate this process. As a rule, a number of measures should be implemented while closing a landfill in order to avoid the emissions of hazardous substances into the atmosphere after closure. We should not also rule out such cases, when waste will still be dumped on landfills after making a relevant decision on landfill closure. Thus, it is extremely important that the process of landfill closure falls under legal regulation (this issue is already actual, since two large “old” landfills located in the suburbs of the capital city are in the process of closure).

In our opinion, “landfill closure” should be added as an activity to the list of activities envisaged by the Law on Environmental Impact Permit. In such case, it will be necessary to conduct environmental impact assessment and to obtain an environmental impact permit for closure of the landfill. Later the enforcement authority will monitor and control the fulfillment of obligations defined by this permit.

Adoption of a standardized environmental technical regulation (generally binding rule) on landfill closure can be considered as the second option. In such case, it will be difficult to consider site-specific aspects; however, the process of closure will be easier from formal point of view. In this case, the enforcement authority will monitor the compliance of the facility with standard obligations defined by the technical regulation.

Closure of so called illegal, spontaneously originated landfills (dumpsites) is also very important. Exact number of such landfills is unknown. However, as we have mentioned above, apparently, each settlement has at least one such place. As it seems, self-governing units will be instructed to solve this issue, but they will fail to cope with it independently; hence, the role of the Ministry of Environment Protection as well as the Ministry of Regional Development and Infrastructure is very important in solution of this issue.

During closure of such landfills, the polluted sites should be cleaned up. In this case, there should be some places, where collected waste will be safely disposed. It is also important to remedy and restore the sites to their original and close-to-original state, and to identify the opportunities for their further use. To implement all these measures and to legalize the entire process, it is very important that the above mentioned agencies not only actively involve but also manage the process.