

WORKING PARTY Nº 2 ON COMPETITION AND REGULATION

MUNICIPAL SOLID WASTE Contribution from Peru¹

1. Definition

In Peru, the collection service of solid waste is about collecting common solid waste and debris from homes, shops, supermarkets, restaurants, hotels, banks, etc.,² as well as its transportation and disposal,³ i.e., there are three stages: collection, transport and disposal.

- The collection of residential solid waste is done manually or mechanically and this is placed in a collecting vehicle and/or compactor. Also the streets are cleaned and solid waste dumped in the street is collected.⁴
- In the transportation step, the rubbish truck and/or compactor is brought to the point of waste concentration (called transfer plant) where the load weight is checked, the waste is unload and the vehicle is cleaned. The use of the transfer plant is intended to receive the vehicles that carry out the residential collection and transfer the solid waste that they bring into larger big capacity vehicles called "transport truck" in order to transfer this solid waste to a landfill.⁵
- The final disposal relates to the destination of municipal solid waste that could be recycled, burnt or sent to landfills installed at sites licensed for such purposes, or other final destinations as open dumps, rivers, lakes or sea; recycling or waste.⁶

2. Collection and transportation of Municipal solid waste

The municipalities are the entities responsible for the collection service provision of solid waste within their jurisdictions, being that the provincial municipalities are responsible for service provision in the capital of the province and the district municipalities in the jurisdiction of their district⁷ (Law 27314 of July 20, 2000).

Users of such services are required to make periodic payments - known as municipal taxes – to the municipality of its jurisdiction to finance their provision.

¹ Elaborated by Santiago Dávila (CEO of Indecopi), Javier Coronado (Economic Research Manager) and Roberto Daga (Executive 2).

² In the case of uncommon solid waste as those from hospital (syringes, gauze, serums, etc.) it is the entities themselves generating such waste which must hire a private company to be in charge of the respective collection, transportation and disposal.

³ The description is taken from Metropolitan Municipality of Lima - MML (2007) and District Municipality of Miraflores – MDM (2009).

⁴ This service is known as street sweeping and refers to manual and/or mechanical sweeping of sidewalks, driveways and central berms for collecting solid waste in small amounts, and picking up solid waste that have been dumped on roads, sidewalks, parks and squares. Solid waste services and street sweeping make a single service known as public cleaning service.

⁵ Recyclable solid waste is taken through a space called segregation plant which separates each of the different types of materials (paper, plastic, cardboard, cans, etc.) for its subsequent marketing. Organic waste that comes along with recyclable waste is taken to the landfill for disposal.

⁶ These final destinations of Municipal solid waste are mentioned by the municipalities themselves in a survey (called National Register of Municipalities - Renamu) that the National Institute of Statistics and Informatics (INEI) performs annually (Inei, 2013).

⁷ A province is composed of several districts.

According to current legislation (Law 27444 April 10, 2001), the amount of municipal taxes must not exceed the cost of the service supply, and must also be established through municipal ordinances, legal devices that are issued by agreement of the city Council.

In the case of district municipalities, these Bylaws (including the amounts for municipal taxes) must be ratified by the provincial municipality of their respective jurisdiction and be published in the year prior to their application. For example, in December of each year the municipalities of Lima Metropolitana and Callao publish the amounts by municipal taxes to be charged next year.

Despite the above, according to information from the Ministry of Environment (Minam), the resources effectively collected through municipal taxes are not enough to finance the collection service of solid waste. In particular, the high rate of late payment of these excise taxes (estimated at 64,5% at national level in 2011 by the Minam, 2012) appears to be the main cause of the budget deficit.

Also, some municipalities hire private companies (called Companies Providing Solid Waste Services, EPS-RS) to be in charge of providing the collection service, transportation and disposal of solid waste in all or part of their jurisdiction.

In 2011, 83% of municipalities provided the service through the municipality itself, 13% organized the service by mixed operations, and 4% outsourced the service completely (Minam, 2012). In Box 1 a case of mixed operation in collecting solid waste is described.

BOX 1: MIXED OPERATION IN COLLECTING SOLID WASTE

An example of mixed operation in collecting solid waste is the District Municipality of San Juan de Lurigancho, within the jurisdiction of the Municipality of Lima, where 75% of the area of the district (which is basically a flat surface with a relatively easy access) is served by an EPS-RS called Petramas SAC, while the remaining 25% (consisting of homes located in the skirts of the mountains) is covered directly by the municipality having to hire (for that 25%) only the service of some landfill for the respective disposal.

The private operation is justified because the cost of the service (which includes three stages: collection, transportation and disposal) reaches S/. 89 per ton of solid waste⁸ (U.S. \$ 32,41), while if the operation was direct (by mayor authority itself) cost could increase up to 70%.

In this case the trend for the private operator is to have greater coverage within the district because some years ago it only covered 50% and now has a range of 75%.

Source: Interview with Geraldine Quispe, Supervisor of Solid Waste in the Municipality of San Juan de Lurigancho.

For municipalities that outsource (all or part) of the service of solid waste collection, selection of suppliers (that is, the choice of the EPS-RS) is done by public tender organized by each municipality every two or three years, although there are also cases

⁸ The amount is cited in the Public Bid N° 0002-2011-CE/MDSJL (Minam, 2012).

where the service is not hired (as in the previous case) but is leased for a longer period, between ten and fifteen years (see Box 2).

BOX 2: AN EXPERIENCE OF PUBLIC CLEANING SERVICE CONCESSION

In 1995 the Metropolitan Municipality of Lima (MML) gave the concession of cleaning service (solid waste and street sweeping)⁹ of *Cercado de Lima* to the company Environmental Relima SA, then called Vega Upaca Consortium, besides granting the management and operation of the Zapallal landfill and Portillo Grande landfill, located in the northern cone (Carabayllo) and south cone (Lurín) of the city of Lima. The initial period of the concession was for ten years and was renewed until October 25, 2015.¹⁰

The cost of collection, transportation and disposal of solid waste in *Cercado de Lima* amounts to S/. 100 (U.S. \$ 36,42) on average depending on whether the collection is from houses, businesses or market. The solid waste generation is about 400 tons per day.

In the MML there is an administrative area only intended to make sure the service concessionaire meets the established route for solid waste collection using GPS technology for this purpose and verifying that the collecting vehicles are not delayed longer than allowed in a given point of the course, this in order to verify the quality of service and ensure that only solid waste is collected in *Cercado de Lima*.

Despite the above, being that the concession agreement is close to expire and that current contractual requirement meets an outdated technology (basically collection and burial of solid waste in landfills), an international tender is underway to find a dealership with a full public cleaning service that also includes the construction of segregation plants for recyclable and treatment materials to develop solid waste products like bags, blankets, polar, fertilizer, etc.

Source: Interview with Eduardo Flores, Manager City Services in the Metropolitan Municipality of Lima.

Municipalities that want to hire an EPS-RS publicly announce the reference price (in Nuevos Soles per ton of solid waste) to be paid for the collection, transportation and disposal of solid waste within their jurisdiction, and also announces the number of solid waste (tons per day) to be collected within their jurisdictions, being that this volume can vary from 25% up or down.

Once announced the reference price, quantity and other technical aspects, private companies (EPS-RS) make their decision as to whether or not they are willing to participate in the selection process being to choose the company that offers the lowest price and meets the relevant technical requirements.

The winning bidder enters the market with their own equipment (compactor trucks, public janitors, etc.) to provide service both during the collection stage as the transportation of

⁹ International Public Bid N° 001-95.

¹⁰ See: http://www.invermet.gob.pe/phocadownload/invermet/supervision/contratos/vigentes/adenda_relima_07062010.pdf. Retrieved on October 3, 2013.

solid waste, being that for the final disposal stage of solid waste it can use its own landfill or that of a third company.

For example, there is a landfill known as Huaycoloro (operated by Petramas SAC company which also operates in the stages of collection and transportation of solid waste) where another company (Relima Ambiental SA, which also operates in the stages of collection and transport) may leave (prepaid service) solid waste collected in the districts that have leased or hired the service.

In the case of San Juan de Lurigancho it has been observed that a single company (Petramas SAC) is the one that has won the bidding, and is also the only one that has been presented in at least four of the latest tenders.

3. Final disposal of Municipal solid waste

In Lima Metropolitana y Callao almost all solid waste is taken to a landfill. According to the Minam, 96% of solid waste is destined for a landfill (Minam, 2012).

However, national statistics indicate that 71% of municipalities reported that at least a significant part of their solid waste goes to open dumps. On the other hand, 21% of municipalities said at least a portion of their solid waste is recycled (Inei, 2013).

Among the municipalities with recycling programs the case of Santiago de Surco stands out. It has implemented its program since 2001 and is the most advanced in the field (Durand and Metzger, 2009) (see Box 3)¹¹.

BOX 3: AN EXPERIENCE OF SOLID WASTE RECYCLING

In some district municipalities as Santiago de Surco, located in the Lima Metropolitan area, residents voluntarily participate in the separation of the waste produced in their homes, which are collected once a week using orange bags provided by the municipality. The recyclable waste are taken to a physical space called segregation plant where they are separated into paper, plastic, cardboard, cans, etc. for subsequent commercialization.¹²

The homes participants involved in the recycling program do not receive any financial incentive in return, but do receive some recognition through the distribution of articles coming from the reuse of recycled waste.

In the opinion of the municipality itself, the benefits of this recycling program is summarized as follows: i) Improving the quality of life for residents of Santiago de Surco; ii) improving the environment; and, iii) International recognition; and an increase in the value of land (estimated around 15% excluding the associated increase in real estate

¹¹ Moreover, since 2010 this participates in the Segregation at Source and Selective Solid Waste Collection by which, prior to meeting targets, the Ministry of Economy and Finance (MEF) allocates resources to municipalities as incentives for the compliance with them (Minam, 2012).

¹² The other waste (non-recyclable) are collected daily using black coloured bags that are also provided by the municipality. The provision of the service (both recyclable and non-recyclable waste) is run by the municipality through the Municipal Company Santiago de Surco SA - Emusssa, i.e., there is no private operator that has had the service concession.

boom experienced by the country) and a resource-saving as recyclables are sold to traders of solid waste. However, the amount of waste that is collected through this recycling program, at around 12 to 15 tons per day, is still below the target set in the program at 30 tons per day.

Source: Interview with Mr. William Chata, recycling program manager of the Municipality of Santiago de Surco.

4. Sectorial studies

In Indecopi no complaints of violations of the rules of free competition in the solid waste sector and EPS-RS have been received or complaints about unfair competition of municipal solid waste collection have been filed either.

However, a sectorial study where it is estimated that the technical efficiency in the provision of waste collection service varies between 37,69% and 60,16% has been carried out, implying a potential resource savings of up to S/. 141,30 million of the S/. 241,23 million budgeted by municipalities of Lima Metropolitana and Callao for the year 2009, or alternatively implying almost triple the provision of waste collection services (in number of tons) using the same amount of resources of the municipal budget (Davila *et al.* 2009).

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