

MODULE - 4

Organization

MODULE STRUCTURE:

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1. LEARNING OBJECTIVES:

After completing this module, you should be able to:

- Clarify essential MSWM functions of local government
- Explore the benefits and how to establish inter-LGUs
- Develop the adequate/ effective type of waste management service
- Find out the ways to improve the chosen type of management
- Learn how to control the quality of services
- Learn how to establish local regulations
- Emphasize the importance of information and communication and learn how to design and carry out it

2. LOCAL ORGANIZATION ON WASTE MANAGEMENT

2.1 Waste Management Stakeholders and Responsibilities-Institutional Arrangements

There are a number of different role-players involved in solid waste management provision and the municipality needs to establish a clear institutional map in terms of who is responsible for what in the solid waste management system. The following issues need to be clarified.

a) Essential Functions of MSWM

MSWM is essential to public health and environmental protection. It has also an important role on the touristic economy, by the fact that the presence of waste in the cities, on rivers or landscape reduces strongly the touristic interest of a country or a town: tourists go away from the waste. Certain goals of MSWM, such as the provision of a waste collection service to everyone, and the improvement of waste disposal practices, have the character of 'common goods'. In fact the waste of everyone must be collected, but the communal waste collection must not be done everywhere where they are people. This is impossible. The density of the waste collection is a political choice and has an high effect on the costs. Waste is normally collected on specific points in the main streets where the trucks can come, the people living in remote area having to transport they waste to these places by their own, as they do for shopping.

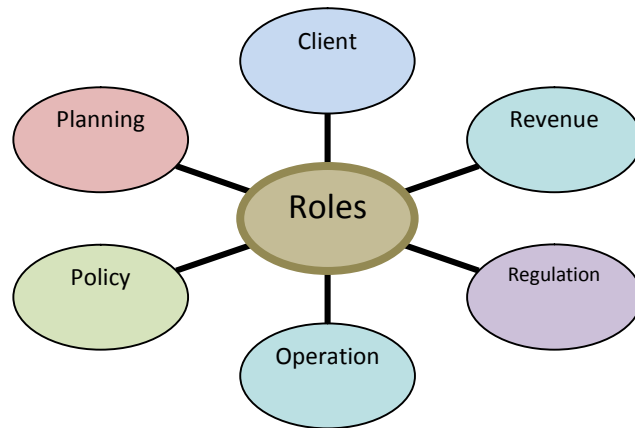
As a common good, MSWM is an essential service that everyone has a right to, and provision of the service is an essential responsibility of a municipal council, as the body representing the interests of the public. On another hand, the payment of the service of waste collection and the good practice of waste management is, as for any service, the duty of all the beneficiaries and a condition of sustainability of the service.

Effective organization and management and regulation are required to sustain an effective MSWM system. When planning improvements in the MSWM system, attention needs to be placed on ensuring that institutional roles and responsibilities are clearly defined, and that institutions and other organizations involved in MWM are both sufficiently resourced and accountable for their performance. Ensuring single source accountability and improving the operational autonomy of MSWM departments, but retaining checks and balances, can significantly enhance performance.

Essential MSWM functions can be generalized into six areas:

- (i) **Policy** – national government direction, legislation may be used to implement aspects of policy; Municipal SWM services take place within a *'policy'* framework which is generally set at national level, endorsed at the regional or local political level. Local regulation must define role and duties of the beneficiaries, as well as control and sanctions for the bad practices.
- (ii) **Planning** - the process of determining needs and priorities, and necessary actions to be taken to develop waste management practices; the *'planning'* function will rest within municipal government. However, municipalities should ensure that key stakeholders from other sectors are involved during the planning process.
- (iii) **Regulator** –the *'regulator'* function aims to assure that the standards are met. Under national legislation, MSWM services need to meet certain environmental standards. They would typically, for example, be responsible for authorizing and issuing permits to waste treatment/disposal facilities and for monitoring both the standards of design and construction, and of operation and maintenance, to ensure that proper standards of environmental control, as set out in the permit, are maintained e.g., during the operation of the facility. Local or regional authorities can also define certain standards or priorities.
- (iv) **Revenue** – responsibility for collection of taxes and charges; The municipality will also be responsible for ensuring that sufficient taxes and *'revenues'* are collected to support the overall MSWM service.
- (v) **Client** – function is where the responsibility rests to ensure that the service is provided, and that it meets the required standards of reliability, efficiency, customer relations and environmental protection. Preliminary activities include defining standards of operations, agreeing these with the operator (often via a competitive tendering procedure), monitoring and enforcement.
- (vi) **Operator** – responsibility for providing services; *the 'operation'* function consists of the MSWM services delivery. That means the responsibility for the day to day delivery of MSWM services. This needs to define realistic and clear rules of operations.
- (vii) The **control** function of the operator, but also of the client (or beneficiaries) is an essential task to allow for progressive adaptations and improvements in the efficiency and cost effectiveness of service delivery. The service must be continuously adapted to the real needs of the evolution of the city and customers, and the quality and efficiency of the service must be

continuously controlled and have impacts on the revenues of the operator. The control function must also be the point of contact with the clients, to receive their needs or critics on the quality of service.



Add “Control”

Of these functions, policy relates to national, regional and municipal level of government, planning, regulatory functions relate to the regional/ municipal level, and revenue, client, operator and control functions to the municipal level of government.

b) Separating the Function of Client from that of the Operator

The relative inflexibility of local government in its day-to-day management has led to the widespread introduction of the private sector and community organizations as the operator of MSWM services. The separation of the Client from the Operator of MSWM services and the introduction of the control function creates a climate for improving performance of MSWM services and increasing levels of private sector and community participation.

c) Organizing Services

A successful and sustainable operation for waste collection and street sweeping requires close liaison and cooperation between the responsible management, the supervisors and the local community.

There are other factors affecting the size and type of organization as economies of scale can lead to different organization of 'operation' function on different waste management services.

d) Internal division of responsibilities

In Albania local authorities do not have the same approach to the allocation of solid waste management responsibilities internally. Most of them have located solid waste management staff or person within the public works department, while no one locate it within the engineering/ projects department. Only few of them have established a separate solid waste management structure or department which organize and control services and facilities related to waste

management. Due to the necessity to have a specific budget and cost control, to the large number of personal (most of the time the personal for waste collection and streets cleaning represents a majority of the city staff) and the specificities of the technical tasks, the creation of a separate structure can or must be evaluated.

e) Service provider involvement

Once the allocation of powers and functions between the national, regional and the local authorities have been clarified regarding municipal waste and other solid waste streams generated locally, a decision has to be made by the responsible authority (city hall and municipal council) on institutional arrangements for solid waste provision.

(i) Internal service provision: the municipality/commune can provide all municipal solid waste services by means of its own internal resources.

(ii) External service providers: the municipality is empowered under the legal framework, to provide municipal solid waste services by an external mechanism by entering into a service delivery agreement with an outside organization. This outside organization can be another public sector body, a private sector firm or a community based organization. In all the cases, the municipality will need to set up monitoring and regulatory mechanisms to regulate the performance of the service providers.

(iii) Small contractors: the use of small contractors for different waste services, starting from urban waste collection, maintenance or mechanical works for trucks or container, planning, recycling, street cleaning, control or communication purposes. Service delivery agreements can be contracted into with:

- Small firms;
- Single contractors;
- Community-based providers.

(iv) Direct private sector contracts with customers: (Private waste service providers): In some cases, private firms could contract directly with customers to remove and dispose of solid waste. This would typically be with large commercial, industrial, construction or hospital waste generators for the removal of general waste. In such instances, the municipality does not have a tariff setting or regulatory role, except insofar as this waste removal falls under other legislation or by-laws, such as those concerning health and safety, environmental protection or transport. In this case, the control function is important to ensure that the wastes are properly disposed.

Agreement on the nature of the service contracts should be reached. The different service providers will have different contractual arrangements with the municipality depending on the role they play in solid waste management.

Local authorities should own mechanisms which must be followed to assess whether to provide the service internally or externally and procedures to manage external providers.

3. INTER-LGU COOPERATION AND REGIONAL ORGANIZATION

3.1 Development of Inter-Municipal Cooperation options

During the setting-up of the MWM system, decisions must be made regarding the geographic scale at which municipal waste management shall be organized and the division of responsibilities between involved municipalities. Furthermore, principles for the involvement of the private sector should be determined at the early stage as this fundamentally affects the possibilities.

Many studies and research are conducted recently in European countries in order to find out the cost-effective size of organization for different waste management components.

a) Economy of scale at waste collection

The following example may help to organize a cost-effective waste collection service in terms of size of population:

“When dealing with municipalities of a population over 20,000 there are no significant average cost differences. This has to do with the decline of scale economies in this type of municipalities. Nevertheless, inter-municipal cooperation in less populated municipalities (below 20,000) does have a significant relation with lower average costs (19-22 %) and appear to be a proper formula to address scale economies”.¹

International experience suggests that the minimum number of vehicles in one organization is approximately 10. Service with few trucks is not economical. Furthermore, a waste collection organization should have a size that enables it to utilize stand-by vehicles, repair workshop etc providing better maintenance and vehicle repairs.

Many smaller municipalities in Albania will not employ this number indicating that there could be a cost saving potential in organization of a waste collection together with other municipalities or with a private operator working on an inter-municipal level.

b) Economy of scale at recycling

Recycling of waste involves collection activities that might be organized at municipal level. However the processing and the sale operations often require a larger scale of organization to improve the economy. Thus, the private or the inter-municipal cooperation is often a preferred model for recycling activities.

¹ Do public sector reforms get rusty? An empirical analysis on privatization of solid waste collection (2004) GERMA BEL (Cornell University & Universitat de Barcelona)

c) Economy of scale at Waste disposal (land filling)

In the context of a final route of disposal, we know that landfills have huge potential economies-of-scale so the local landfill is excluded as an option. In order to justify the investments in environmental protection, waste registration facilities etc. and to assure a reasonable economy, a modern landfill should be designed to serve at least 200,000-250,000 inhabitants during a period of 15-20 years or more. Inter-cooperation or regional/national initiatives for building or managing a landfill are necessary.

d) Enhance and encourage Private participation:

It is deemed principal that inter-municipal waste management organizations remain under public control, i.e. with the majority of votes and shares in public possession. However, it may be attractive to base the organization on a public-private-partnership (PPP) with a private investor involved and payment of fees by the client or by the public sector. This set-up needs a good preparation to establish detailed terms of references and contract and it should be noted that the concept might impede aspirations to attract international grant financing.

Many municipalities have a size smaller than optimal for service production, and contracting out allows a private firm to produce the service in several municipalities in the same zone, already taking advantage of economy of scale. However, aggregating the service in districts wider than the municipality through inter-municipal cooperation allows for exploiting scale economies, with either public production or private.

3.2 How to organize an inter-Local Government Co-operation

a) Joint organization

It is possible for two or more local government units to jointly develop a waste management project. This would be the case where two or more local government authorities agree to develop a common waste collection scheme, a landfill or waste treatment facility, where the solid waste generated in the jurisdiction of these two or more authorities would be managed, i.e. in this case the local government authorities would jointly exercise their own functions.

There are several ways to initiate and formalize inter-municipal waste management organizations, ranging from non-profit companies to private companies with public majority shareholding, from organizations created by a few municipalities to organizations with direct representation of all municipalities in the service area.

b) Reach consensus

It is not necessarily important that all municipalities in the service area will take part in the ownership structure, as long as these municipalities are bound by individual contracts. International experience shows that it can be difficult and take long time to reach consensus among a wider group of municipalities and it is often easier to start the organization on the basis of the most interested municipalities. In some countries, the regional authorities divides the

territory in defined and good sized perimeters, where the local authorities are forced to collaborate in an inter-municipal waste collection and treatment organization.

c) Joint agreement and potential legal structures

The joint function is not a new concept as the Law on Local Government already allows two or more local government authorities to establish an inter-unit cooperation for the performance of such functions enabling them to regulate their cooperation through a joint agreement entered into between all the local government authorities involved. Based on this joint agreement a legal entity, board, committee may be established (termed the entity of joint competences”) acting as a type of special purpose vehicle that shall be afforded the necessary authority to perform its functions (art. 14, art. 8 of the Law on Local Government).

A common joint agreement comprises:

- The purpose and functions to be carried out jointly;
- The methods and manners used for the realization of the purpose;
- The degree and duration of delegation of competences;
- The manners and amount of contributions and the profit sharing (art. 14 of the Law on Local Government).

The joint of local government authorities can be identified as the contracting authority, thus all be signatory to the contract. They can then establish this board or entity (as afore-mentioned) by the inter-unit cooperation agreement for the sole purpose of realizing the object of the service/ concession contract. Through this agreement the authorities can determine who responsible person(s) are to be allocated from each local government authority for undertaking and completing all the necessary procedures for procuring, signing the contract, supervising while implementing the contract, benefiting from the rights and being responsible from the obligations deriving from the contract.

As a potential alternative, the entity could be established perhaps at the stage when these local government authorities have identified the project that shall involve both or all of their units, and then this entity could be named as the Contracting Authority. This entity shall have the direct contractual obligation towards the contract and direct rights from it.

d) Case studies of Inter-communal Cooperation in Albania

Several regions in Albania have started to cooperate with each other in realizing the public function of waste management under their own territorial jurisdiction. There is the case of Bushati where a company has been established to manage a landfill accepting waste from several local government authorities, or the case of South East Albania (Korca, Pogradec and their communes), where an inter-unit cooperation agreement has been signed between the local

government authorities for the performance of a joint solid waste management project. The table below describes these examples of inter-communal cooperation in the waste management sector:

(i) Southeast Region

Under the framework of a KfW project Korca Municipality, Pogradec Municipality and some 26 other municipalities and communes of the region established a regional waste management company, namely “Korca Region Waste Management - KRWM SH.A.”. The object of activity of the company is the collection, transportation, administration and depositing of all types of solid waste. Once the company is fully operational and will have some experience, it is expected to contract out some of its responsibilities to private companies. The form of cooperation with private companies (investors) is not yet defined (i.e. it may be in the form of public procurement service/work contracts or concession contracts). This example is provided to reflect a form of cooperation of different local government authorities with the purpose of jointly managing a solid waste management project. Not all the municipalities and communes of the region have joined in the establishment of the Company, yet they are expected to join at a later stage.

(ii) Bushati Region

Under the framework of an Italian project a feasibility study and detailed design for the construction of a sanitary landfill for the disposal of solid waste from the Shkodra and Lezha Regions was carried out. The Bushati site was designated and an environmental permit for the construction of the landfill approved by the Minister of Environment (15.11.2006). The landfill was designed to serve the population of several municipalities (including those of Shkodra and Lezha) and communes.

The funding for the construction is provided by the Government of Albania. In light of the above and in compliance with Decision no. 41, dated 23.12.2005 of Bushat Commune Council on Bushati Landfill, the Commune of Bushat established on 28.08.2008 an inter-communal company (*Ndermarrja Ndërkomunale Bushat SH.A.*) responsible for managing the urban solid waste services for Shkodra and Lezha regions through a landfill built in the territory and jurisdiction of Bushat Commune. Furthermore, the municipalities and communes of Shkodra and Lezha regions have agreed in principle on depositing their solid waste according to a contract with the Inter-Communal Company Bushat SH.A. In this regard a memorandum of understanding has been recently signed by the respective representatives of the Ministry of Public Works, Ministry of Environment, the Bushat Commune, Shkodra Municipality, Lezha Municipality etc. Some 10 local government authorities intend to be represented in the Supervisory Board of the inter-communal company. They have agreed to negotiate, under an inter-unit agreement, the conditions of service and the financial terms related to the disposing of the solid waste at the landfill.

4. CHOICE OF PUBLIC OR PRIVATE SOLUTION

Whether the service is provided by private companies or public company, local government retains responsibility for the collection and disposal of solid wastes. LGU remains responsible to ensure that a service is provided, and that it meets required standards in terms of reliability, efficiency, customer relations and environmental protection. These fundamental responsibilities are not diminished by any privatization process. The role of the LGU changes as the private sector becomes more involved. Resources are concentrated towards monitoring, enforcement and control, but it is still government that is responsible.

In both cases it is very important that the municipality makes all efforts to insure that the payments of the service are made at the contractual level and on a very regular and continuous basis to ensure the sustainability of the service. If not, the service can be interrupted with very high effects on environment and high cost for cleaning of the city.

The question then is how does the municipality decide whether to invite private sector participation or to keep it public? And does it invite competition from the private-sector while allowing its own commercialized operations entities to compete for that service?

Some of the criteria which need to be examined in deciding whether to involve the private-sector, or to allow competition between the public and private-sectors or to choose for a public service delivery, for the provision of solid waste management services are set out in the following analysis.

These criteria deal with many complex factors that affect the ability of the private and public sector to perform efficiently and effectively. To ensure successful involvement of the private-sector or public companies, the municipality must be able to resolve all, or most, of these issues satisfactorily and develop the strength and skills of the MSWM department.

4.1 Choice of private vs. public solution

a) Efficiency

By experience, the private sector has shown that it can provide a more efficient or cost-effective service; Private sector operators are motivated by accountability and competition, and by the need to fulfill certain specific requirements as set out in contractual agreements.

There are a number of reasons why public-sector waste management services are not as efficient as they could be the following:

- (i) Waste collection needs to manage a team of low level workers making a hard work. It is of high importance to have a strong management of the team, so that the work is done with efficiency. A close every day control of the involvement of the personal and the quality of the service is also absolutely necessary, with a quick and strong reaction in case of deficiency. This is important to establish a team spirit of the service. Public sector has often a bad definition and control of work quantity and quality from his employees, having difficulties to reduce the staff or to interrupt a contract when necessary. It results usually with too many workers.
- (ii) To get and maintain efficiency needs a strong, regular and personal involvement of the management in the field and time of operation and when necessary in the night also. For maintaining their profit at a sufficient level, private sector managers are generally more involved in the business to define, control and better the efficiency of the service; however, it can be meet in public sector strong personalities able to manage such service, but the private sector offers them often better conditions.
- (iii) Private sector has generally more options to encourage high productivity from waste collection crews and other workers;
- (iv) Cost efficiency is also strongly related to a good and regular maintenance of the vehicles and material (bins), as well as by preventive maintenance as by reparation. This need good mechanicals and material, but needs also the possibility to deciding immediately to buy material or pieces when necessary. This financial reactivity is generally more difficult in the public sector, where the first priority is to pay the salary or tenured workers, even if this means that there are not enough spare parts available to keep all of the vehicles in operation;
- (v) Private sector companies are less restricted by bureaucratic procedures and more able to concentrate resources where they are needed.

It is supposed that public management is cheaper than private management as it is excluded from profit share or from business fees but this is not always the case, the experience showing that the lack of efficiency can be much more important than the normal benefit of a company. Very often cost comparisons between the private and the public sectors are unfair because not all of the actual expenditures are included in estimates of public sector costs.

It is not uncommon for municipal administrations to be unaware of the actual costs of their waste collection and disposal operations because their accounting systems do not provide information on all the costs related to waste management.

On the other hand, private companies will be more cost-effective and efficient if they have a reason or pressure to be so. This needs competition, good contract, good control and efficient penalties system. If the involvement of the private sector is well managed by local government, there is competition, both at the tendering stage and during operations, and such competition produces efficiency. Conversely, if there is no competition and monitoring is poor, a private sector service may be inefficient and more and more expensive. As a result, it does not

necessarily follow that private-sector waste management services will necessarily be more efficient or effective than those provided by the public sector. It can be seen in the world numerous cases where private MWM organizations have reach cost inefficiency by lack of control and concurrence, often due to corruption.

Private sector companies may exploit their workers in terms of low pay or unacceptable working conditions. Requirements should be written into contracts and rigorously enforced.

b) Effectiveness:

It is supposed that private sector administration is more effective than public sector administration, as the private sector may have easier access to specialist skills, consequently can reach better technical expertise than the public sector. Public sector management does not encourage the good work as there are missed economic incentives for it.

Private companies can generally achieve better vehicle maintenance and their workforces are more flexible to cope with unforeseen circumstances, and well-written agreements and good enforcement are important in ensuring good operational performance.

The cases when private sector working standards are lower or decliner, resulting in environmental degradation and many complaints, need to be addressed by the following measures:

(i) Contracts and agreements should clearly specify the standards that should be attained, and prescribe penalties for failures. In the event of serious failures government should be able to apply penalties or take over.

(ii) Companies providing services by private subscription are required to have licenses.

The license can be revoked if performance is unsatisfactory.

c) Capital financing

The private sector often has better access to capital financing and so it is able to use more efficient equipment.

Meanwhile, there are certainly cases where the private sector uses very unsuitable vehicles. This is either because the duration of the agreement/ contract is too short to allow the companies to take out and repay loans for the purchase of suitable vehicles, or because the agreements do not specify requirements or the requirements are not enforced.

d) Access to good buying conditions

The private sector can be more reactive and able to find good conditions in the world market to get good quality/price machines or equipment, particularly in the second hand market. On another hand, public sector can get good second hand vehicles from other municipalities of the world by inter-municipal solidarity.

e) Control of Operations and technical standards

With its profit orientation, private sector is forced to develop a good definition and control of operational and technical standards, therefore improved services for the citizens. If the competition is correctly organized, the private company must also develop an good image for winning the next competition, and then control and improve the quality of the service.

f) Reliability

Generally private companies provide reliable and good quality services, but this is not always or automatically the case. There is the risk of commercial failure of the company providing the service, especially if the price of the concurrence are too low or if the payments of the service are not done, resulting in a breakdown of the service. Very low bids may be rejected at the tender stage. Performance bonds provide resources for maintaining the service by government or other private sector companies. Flow control agreements should guarantee revenues for recycling and disposal operations.

On another hand, public MWM organizations can suffer a lot of political changes in the municipality. As mentioned, the importance of the manager staff is high and the risk of degradation of the service due to change of leaders resulting of a political change in the municipality is high. It has be seen in a lot of municipalities in the world.

g) Private sector interest

Municipal managers may worry that there will be a lack of real competition because only a few companies are interested in tendering for the work. As a result prices may be high and an inadequate company may be awarded the work.

- (i)** The sizes of the collection zones should be appropriate to the capabilities of prospective bidders.
- (ii)** The tendering and monitoring procedures should be transparent and fair, and effective so that unscrupulous companies are not able to cut corners.
- (iii)** Arrangements and estimates should allow sufficient freedom to the company to develop its own methods, and a sufficient profit margin.
- (iv)** Most important for the private sector interest is the evaluation of risks/benefits and in particular the ability of the commune to be a fear contractor. It means that the private sector will evaluate the ability of the commune to insure the payments on a regular basis, on the contractual time, without corruption all along the duration of the contract. Very important is the level of the initial investments, more high will be the guaranties conditions of the private sector. For example, in the design, build, and operate (DBO) model for landfill or treatment plant, the initial investments will be very large and the company needs strong long term guaranties to risk so much money. For the machine investments, like for collection

contracts, the risks will be lower, as the machines keep a value in case of interruption of the contract. For operation contracts with low investments, the interest of private sector can be larger, and this type of contract can be a good first step to develop local private sector.

It is a fact that in a large number of small or middle towns in the world, the private sector has not enough confidence in the capacity of the commune to insure the payments and is not ready to respond to tenders without specific guarantees of payments. In some countries, such guarantees can be developed by “fidei comiso” system: guarantees based on the national contributions to the communal budget.

If the private sector has this confidence and the size of the contract is large enough, their interest will grow fast.

h) Perceptions and prejudices

The success of private sector participation may be affected by a number of factors, which generally stem from historical institutional or social context, and from perceptions and prejudices.

(i) Corruption and the fear of corruption have a major impact on public-private partnerships, and so should be considered carefully before making the decision to go ahead with involving the private sector.

(ii) Lack of political will, or changes of political leadership which may bring in different concepts of private sector participation or even a reversal in policy; Longer contract durations and restrictions regarding terminations of contracts help to maintain service arrangements through political turbulence;

(iii) Lack of acceptance by the public and the difficulties of turning around a non-paying culture to introduction of fees.

i) Care for the environment

There are certainly cases where private sector operators have shown no concern for the environment, and have dumped piles of waste illegally, in order to save time and travel, and to avoid paying disposal fees. Moreover, both private and public operators of disposal sites are capable of negligence that leads to serious pollution.

Even as these assumptions may be true in particular cases, there are two incentives that encourage private companies to demonstrate a care for the environment:

(i) The first is reputation or public image, especially where the general public is aware of environmental issues and concerned to reduce pollution. In such cases companies want to avoid gaining a bad reputation and thereby earning public opposition or can make obtaining of licenses or permits very difficult.

(ii) The second incentive to encourage good environmental standards is the control and monitoring by government inspectors. If contractual agreements are well written and effectively enforced, private companies can expect to be penalized for any action which causes environmental pollution. Service providers that do not have contractual agreements with government should be required to hold a license which can be revoked in the case of unacceptable performance.

In a conclusion both private and public MWM organizations have shown good or very bad results. Most important for the success of a public one is the presence of a strong leader able and willing managing a good and efficient service, and having a strong support by the municipality. Without this man, no chance of success.

For both public or private organization a good control of the quality and efficiency of the service is an essential condition of success.

5. PUBLIC ORGANIZATION

5.1 Public Organization (in-house) of Municipal Waste Management

In this instance the municipality provides all the resources (labor, equipment and plant) necessary for the service. This may be the best option where the municipality has an external help, or has existing resources available or, if not, it might employ additional staff and purchase all or extra vehicles and equipment. Political pressure or municipal policies may also dictate the use of this option.

For proper implementation of waste collection, transportation and transfer system, it is necessary to have clear organisational objectives, plan of action and scope of work, structures and roles, and at the end a legal authorization and an approved budget. (e.g., approved by City Council)

(i) Objectives and targets

The public company/enterprise should have clear objectives and targets which must be defined prior starting its activity. Objectives and targets should be agreed and focused on addressing the key issues and priorities identified in the MSWM system as well as measurable to be checked periodically. The objectives must be realistic and can very well be developed step by step, beginning in a certain zone and acquiring progressively material and experience. Having too ambitious objectives in the beginning must conduct to a miss.

(ii) Scope of work:

Before starting the execution of waste services, the scope of the work must be defined. This includes geographical coverage (activity area), population and other consumers to be served and what waste streams the public company will consider and deal with.

The considerations about waste streams to be included should determine the sources, streams and quantities of waste generated, current collection, transportation and treatment, and how these might change in the future.

Designate type and standards of services/ time table of collection / material / methodology/ rules/ locations of bins for the temporary throwing of waste and approve any change of such locations/ cleaning zones and streets to be cleaned, and resource required.

(iii) Organization of work and arrangements

- **Structure and roles:** The organisational structure should be simple, with a minimum of administrative and management layers between collection crews and top management. All workers in the public company should clearly understand the company's mission and their own roles. They must have a very clear definition of the quantity and quality of the work : time table, streets to be collected, and quality of cleaning the waste collection places and streets, management of the bins, use of security material, etc. Very important is that every worker begins at due time, so that the team can begin working without delays.

Through training, incentives and reinforcement by management, workers should be encouraged to be customer-oriented and team contributors.

The control responsibility has to be clear and strongly supported by the municipality so that the control and sanctions can be effective.

The financial rules of responsibility for normal and special expenses must be clearly defined with sufficient flexibility to insure a good and on time maintenance of the equipment.

- **Job description:** Personnel should have clear responsibilities and job description: This means that at first it should be prepared a job-description (working program) and working schedule documents on each activity and each waste facility. (Refer to the Module 1, Efficient Use of Resources). Important is to avoid or reduce to a minimum all the "death time" in the working time: reduce and control starting time, aloud only the driver in the transportation time to the landfill (other cleaning function for the assistants in this time), avoid sorting activities by the employees during the service (witch can make loose an important time), etc.

-Commercializing the public sector operations

The idea is to introduce commercial principles of management, and thus to free managers from the restrictive labor practices, so that incentives can be given for good performance.

- Servicing arrangements and schedules:

- Appoint an on-site operations manager who knows the system and can be responsible for ensuring everything works on the day;
- Work out how often you will need to service bins/recycling stations;
- Based on servicing arrangements determine how many staff you will need;
- Schedule staff numbers and occasional staff to cope with normal and peak times.

- **Feedback mechanisms:** Feedback mechanisms must be introduced to help the crew review their performance and help managers monitoring the performance of crews, equipment, etc. For this it is important to make clear reporting with time-tables of all the activities like time of departure, discharge and come back, name and number of personal, fuel and consumables consumption, km, maintenance, tons or volumes of waste collected, if possible specific duration of critical activities, etc. It is also important to periodically review the objectives, plan of action and structures, as implementation of collection services continues.

(iv) Purchasing and managing equipment:

For purchasing equipment, most municipalities issue bid specifications. Detailed specifications include exact requirements for equipment sizes and capacities, power ratings, ages (for second hand), etc. Performance specifications often request that equipment be equivalent to certain available models and meet standards for capacity, speed, etc.

Municipalities may either perform equipment maintenance themselves; contract with a local garage, or in some cases, contract with the vehicle vendor at the time of purchase. As part of the preventive maintenance programme, the collection crew should check the vehicle chassis, tyres and body daily and report any problems to maintenance managers.

(v) Hiring and training of personnel

As in all organisations, good personnel management is essential to an efficient, high-quality waste collection system. Authorities responsible for SWM should, therefore, strive to hire and keep well-qualified personnel. The recruitment programme should assess applicants' abilities to perform the types of physical labour required for the collection, equipment and methods used.

(vi) Establish a safe and encouragement environment

To retain employees, management should provide a safe working environment that emphasises career advancement, participatory problem solving and worker incentives. Worker incentives should be developed to recognise and reward outstanding performance by management and employees. Ways to accomplish motivation include merit-based compensation, awards programme and a work structure. Feedback on employee performance should be regular and frequent.

Safety is especially important because waste collection employees encounter many hazards during each workday. As a result of poor safety records, insurance costs for many collection services are high. To minimise injuries, haulers should have an ongoing safety programme. This programme should outline safety procedures and ensure that all personnel are properly trained on safety issues. A continuous use of safety clothes and material is also important to develop an image and a team spirit of the service.

(vii) Supervising and control of the services²

The local authority should have established function of supervising ('client function': controlling the quality of services) separate from operations structure ('operating function') and monitoring and record keeping functions inside and outside of the public company. The establishment of these functions comprises human resources (External or appoint persons from the staff of municipality or commune for supervising), clear procedures (indicators, supervising and monitoring procedures and clear support by the municipality).

(viii) Legal authorization and budget approval

Prior starting to exercise his functions the public company should have taken a legal authorization and legal approval by City/ Commune Council accompanied by a detailed and annualized budget for its activity. The proposal which comprises mission and objectives, scope of work and organizational structure (organization chart and salary levels) as well as its rationale (legal, technical, economic, environmental framework) must be prepared by municipality/ commune officials with official permission of mayor of local authority. It is very important that the approval of the budget also includes the structure of the tariffs so that the council give the financial revenues at the same time as the objectives.

6. PRIVATE ORGANIZATION

6.1 Involve and encourage Private Participation on Waste Management

a) Legal framework of private participation on waste management

The public private partnerships in Albania are governed primarily by the following legal documents:

- The Law “On Public Procurement” No.9643, dated 20.11.2006, CMD Nr.1, dated 10.01.2007 “Rules on Public Procurement”;
- The Law “On concessions”, no. 9663, dated 18.12.2006, as amended (hereinafter the “Law on Concessions”) and the CMD “On the approval of rules for the evaluation and grant of concessions”, no. 27, dated 19.1.2007 as amended (hereinafter “CMD on Concessions”). The Law on Concessions establishes the legal framework for private investors to participate through privately financed Concession Projects (as defined below) in public sector activities.

b) Private-Sector Participation

² See Section 2 (Local Organization on Waste Management) and Section 7 (How to Control the Quality of Service) in this module

Private Sector Participation (PSP) in service delivery is one of a range of options for improving the cost-effectiveness of services. Where the private sector can perform services to the same or improved standard at a reduced unit cost, then contracting-out represents a major opportunity for improving overall performance of services.

It is necessary to distinguish between two types of privatization:

- Procurement of operation and maintenance services from private companies, for example operation of a waste collection system or operation of mobile equipment at a landfill;
- Concession contracts that involve multiple services, possibly the entire operation of a municipal waste management organization and possibly with contributions to investments from the private company.

As previously mentioned private-sector operators are motivated by the opportunity for profit. Competition leads to efficiency, and accountability comes through transparency of the contracting process, and effective monitoring of operations.

In order to ensure efficiency gains when contracting-out services, it is essential for municipal authorities to develop their expertise as 'clients'. The necessary functions of a client organization are set out in the following table:

Necessary Functions of a “Client” organization:

<p>Operations Specifying contracts Competitive tendering Contract negotiations Penalties application Negotiations of extensions of services</p>	<p>Financial Budgeting and tariffs decision Management accounting</p>
<p>Planning Planning future service contracts Financial planning</p>	<p>Commercial Collection of customer charges Payment of contractors</p>
<p>Monitoring Monitoring performance of contractors Measurement of efficiency (learning, acquisition and capitalization of experience) and of progress in meeting targets</p>	<p>Administrative Support Salaries Office administration</p>

c) Most solid waste management activities can be privatized

Private sector participation in solid waste management may involve any of the activities listed below.

1	Provision of vehicles or heavy equipment - by lease or rental agreement with equipment owners	7	Sweeping or cleaning of streets and open areas - by service contract
2	Collection of general municipal wastes from entire neighborhoods/ city - by service contract	8	Repair of municipal solid waste equipment - by service contract on an as-needed basis or long term basis
3	Collection of construction and demolition debris - by private subscription.	9	Conversion of waste to compost - by service contract or concession
4	Collection of industrial wastes from large factories - by private subscription.	10	Operation of a transfer station and long distance hauling system - by service contract or concession
5	Collection of commercial wastes from hotels, offices, markets or stores - by private subscription	11	Operation of a disposal site - by service contract or concession.
6	Collection and final disposal of infectious healthcare wastes from hospitals and clinics - by private subscription with private establishments	12	Collection of user charges or waste taxes - by franchise with bill collection agents, water authority, or electricity utility.

d) Types of private sector arrangements

The following table presents four options/ types for private-sector arrangements in the provision of solid waste management services, summarizing their extent of use in developed waste management systems and their implications for cost recovery.

Table: Options for Private Sector Participation in SWM³

Option	Description	Extent of Use	Cost Recovery
Contracting	Through competitive tender, municipality awards a contract to a contractor to provide defined aspects of the overall solid waste management service, for a fixed period.	Used for MSW collection in all EU countries: around 50% of total in Denmark, France and Germany. Competitive tendering for both collection and disposal made compulsory in UK (now replaced with a more flexible Best Value system); after 10 years of	Contractor paid by municipality (fix and proportional fees) Municipality recovers cost from householders, usually as part of general local tax, property tax or with other utility charges (e.g., electricity).
Concession Contract (DBO,	Municipality award a concession to a private company, via competitive tendering, to design, build, and		The contract will generally require municipality to deliver a

³ Source: updated from D.C. Wilson (1994). Private-sector Participation: the Answer to Waste Management Problems in Development Countries? POLMET 94: Pollution in the Metropolitan and Urban Environment, Beijing, pp807-820.

<p>BOO, BOT)</p>	<p>operate (DBO) a facility for solid waste. In simple DBO, ownership is with the municipality. Variations include build, own and operate (BOO) where ownership is with the contractor and BOT where ownership of the facility transfers to government after a specified period.</p>	<p>regular tendering around 70% of collection contracts won by newly commercialized municipal services. Commonly used for transfer stations, incinerators and landfill sites. For the time this model seems not adapted to the Albanian medium or little communes.</p>	<p>minimum quantity of waste to the facility at a pre-defined gate fee.</p>
<p>Franchise</p>	<p>Municipality awards, via competitive tendering, a limited monopoly to a private company to deliver a particular solid waste management service, in a defined area for a fixed period.</p>	<p>Commonly used for MSW collection in the US. This model is not recommended to the Albanian conditions, because it represents a high risk of brutal collapse of the service for the difficulty for the company to collect enough money to ensure the service.</p>	<p>Direct charge by the private operator to householders and other users. The company must have strong legal arguments to collect the money, else the private sector will not participate.</p>
<p>Open Competition</p>	<p>The government compiles a register or issues licenses to companies, considered competent to provide solid waste collection, recycling or disposal services. These companies are then free to compete for contracts with individual householders and commercial establishments for waste collection, recycling and/or disposal.</p>	<p>Commonly used for MSW in the US, and in many countries for commercial and industrial wastes or for residential zones.</p>	<p>Direct charge to customers.</p>

In considering the applicability of these options, it is appropriate to begin with cost recovery, as this is usually the single most important selection criterion. Public health requires that all wastes are collected, so that in many cities a priority is to extend the collection service to poor areas and the sub urban areas. Direct charges are thus unlikely to be viable as the only means of financial

support for a municipal waste collection and disposal service, as many of those to whom the service needs to be provided are unlikely to be able to pay for it.

In light of the above, only two of the four options for private-sector participation would seem to have general applicability:

- For waste collection, the most relevant model is contracting;
- The concession contract has potential for attracting private-sector investment in waste treatment and disposal facilities, but the question of guaranties of payments must be clearly developed.
- Franchise may have for the moment very limited applicability for municipal solid waste collection and disposal;
- Open Competition for municipal solid waste collection and disposal is rarely applied. Commonly used for MSW for commercial and industrial wastes.

e) Assuring the success of public-private Partnership

This section focuses on the two examples of public-private-sector partnership in waste management that is the contracting out of waste collection services to a private-sector operator and granting a concession (DBO, BOO, BOT) contract for provision of a transfer/disposal service.

(i) Competition: There should be real competition between private-sector companies, and also, if possible, between the private companies and between the commercialized public-sector MSWM operations company. Competition provides motivation to maintain effort. It provides a standard against which performance can be compared and assessed. It also provides a continual reminder to the contractor that there are others engaged in the same activity who could take their place if they do not perform.

(ii) Accountability-Ensuring that the contract works: In order that contracting to the private-sector will deliver real improvements in the efficiency and effectiveness of service provision, a number of basic criteria must be fulfilled:

- Well defined performance measures;
- Enforceable sanctions for non-performance;
- Vigilant monitoring; and
- Cost accountability.

(iii) Transparency: Financial dealings and decision making should be transparent. The reasons for decisions - especially the selection of private-sector services providers - and the management of public funds should be open for the public, also very important in the case of public service. In this way, the service can enjoy the support of the public and competition is encouraged since the competitors are reassured that they will have the opportunity of competing on fair and equitable

terms. Public support can be expected to result in more widespread payment of charges or taxes, and fair competition to result in lower costs and better services.

(iv) Appropriate duration of agreement and the provision of equipment:

Contracts that involve investment in vehicles should have a minimum length of five years, and investment in fixed facilities requires minimum agreement duration of ten years. Shorter periods lead to higher prices, because contractors or franchisees are forced to depreciate their investments over periods shorter than the normal economic life of the machines or facilities.

For example, it is recommended that for a transfer station concession agreement is appropriate a ten year period, and both transfer station and sanitary landfill concessions for 15 years.

f) Recommendations to ensure that a waste collection contractor delivers a quality service

- Improve pre-qualification procedures to eliminate companies without the resources or experience to support their tenders;
- Empower of local authorities in supervising contractors (e.g., in inspection of works and in the approval of contractors' invoices);
- Improve the quality of contract documentation, particularly the specification of performance, penalty clauses and bills of quantity;
- Extend the contract period from two-three years to five-seven years, and require the contractor to purchase purpose build waste collection vehicles. Alternatively, make municipal vehicles available to the contractor;
- Expand contracts to include all cleansing services within the contracted area (waste collection, street sweeping, drain cleaning, etc), to reduce overlap and potential conflict of responsibility with parallel municipality services;
- Insist that contractors improve their image (e.g., by use of uniforms) to enable the public to distinguish easily between contracted services and municipality services;
- Insist that contractors maintain a staffed office in the contract area to improve liaison between the contractor, the municipality and the public.

g) Further Guidance for Making Public-Private-sector Partnership Works

(i) Strengthening of the municipality

The municipality needs to be capable of drafting, negotiating and monitoring contracts efficiently. Involvement of the private-sector does not remove the need for technical assistance for training and institutional strengthening within the municipality, rather it reinforces that need.

(ii) Scope for concessions (DBO, BOO, BOT)

Investments in new transfer, treatment and disposal facilities to improve the environmental and public health quality of services will be vital and required in most Albanian cities. The

involvement of private sectors is considered more favorable usually through consortium of local and international companies if they provide investment finance and needs technical knowledges and specific experiences which few exist up to date in the Country.

This DBO option allows the necessary skills and experience to be specified as a clear contract requirement. However, it does not remove from the city the obligation both to specify and to enforce suitable contract conditions and to raise the necessary revenue to service ongoing operational charges and capital repayments.

'Pure' BOO and BOT options, in the sense that they are used for privatization of state economic enterprises, are often found not to be applicable, at least in the short term, to investment in landfill and other waste disposal facilities.

(iii) The Informal/Community Sector: Most of the discussion above refers primarily, although not exclusively, to the formal private-sector. At the same time, there is also a large informal private-sector involved in unregistered and unregulated activities carried out by individuals, families, groups or Micro and Small Enterprises (MSEs).

Considerable attention has been paid in recent years within the international community to promotion of MSEs and community-based organizations (CBOs). One aim is to enhance the contribution of informal waste collection and recycling workers through improved organization. Economic assistance to micro-enterprises can thus assist with both social and economic development objectives, for example, by:

- Improving working conditions and facilities for waste pickers;
- Achieving more favorable marketing arrangements for services and picked secondary material; and,
- Introducing health protection, educational facilities and social security measures;

(iv) Concession Contract and actors involved: The concession contract is entered into by the contracting authority and the concessionaire. The contracting authority is a public authority that has the power to enter into a concession agreement (art. 2/6 of the Law on Concessions). The other party to the concession contract is the concessionaire defined as the legal entity, Albanian or foreigner, with or without local or foreign participation, who enters into such a concession contract with the contracting authority (art. 2/4 of the Law on Concessions). The concessionaire shall be the winning bidder of a competitive concession procedure conducted under the Law on Concession.

Local concessions are granted for those economic activities which pursuant to the legislation in force, fall under the competence of the LGAs (art. 3/10 of the Law on Concessions).

If a LA wishes to develop a project in the sector of waste management by means of a concession the Council of Ministers, based on the Law on Concessions and the Law on Local Government would appoint the respective LA as the contracting authority for that particular concession.

Amendments to the Law on Concessions brought about to facilitate the ease of the concession process included that the Council of Ministers approval shall no longer be required for those

agreements involving investments less than 20 Million Euro (€). This means that the contract can enter into force upon the signing of the contracting authority which in this case should be the LA.

(v) The right of concession in case of local authorities acts together (like inter-LGUs)

The Council of Ministers however do have the ultimate authority to determine the contracting authority for a particular identified concession, and such could be made up of two or more local government authorities. In any event in the absence of such provisions we look to other legislation to draw some inference as to whether this would be feasible and ensure that it would not be unlawful, as we understand the nature and size of a bankable waste management project may very well exceed the territorial and competence of merely one local government authority. This would be the case of the municipality of Shkodra and Lezha undertaking a joint waste management project (i.e. landfill) where the waste of both communities would be disposed and managed by a private company contracted by both municipalities. The Albanian legislator does recognize the principle of discretionary power of the public administration institutions. The Law “On the Code of Administrative Procedures” no. 8485, dated 12.5.1999, (hereinafter “Code of Administrative Procedures”), provides that the discretionary power of the public administration shall mean its right to exercise public authority for the realization of a legal purpose even in cases where there is no express authorization from the law (art. 7).

6.2 Organization of waste management procurement and contracts

The procurement process needs to take the local authority and private sector objectives into account and attempt to achieve a win-win arrangement for both government and the private sector. Good companies rise to the position of leadership and win contracts when the procurement process is well structured.

Local government’s objectives:	The private sector’s objectives:
<ul style="list-style-type: none"> - To insure a good service to the population and the environment protection, - To pay as little as possible for good service, and - To gain the appreciation of voters. 	<ul style="list-style-type: none"> - To minimize its costs, - To have reasonable profit and to maximize it, and - To develop a good image in order to extend the activities (in time and space).

To be effective, the procurement process should be:

- Well advertised, to attract a large number of qualified bidders,
- Transparent enough to convince well-established and reputable firms that they can compete fairly with younger or local firms,

- Equitable enough for foreign firms to believe they can compete fairly with local firms, and
- Scheduled so as to give all bidders enough time to prepare a good bid. It must be thought that the competitors have usually to look for partners and to make they own dib to get good conditions for material or services. This takes time.

The open procedures for solicited proposals (i.e. proposals initiated by the contracting authorities), are developed in one or two stages. The contracting authority provides the pre-qualified bidders with the request for proposal and related documents, or any other document if deemed necessary.

The contracting authority may use a two-stage procedure to request proposals from bidders, e.g., if elements of the concession project such as project specifications, performance indicators, financial arrangements or contractual terms cannot be described in the request for proposal in a manner that detailed or accurate that would allow the bidders to submit their final proposal.

The full tender procedure and requirements are clarified at existing legislation on public procurement and concession.

a) Steps/ elements of a procurement procedure on waste management

Step 1: Evaluate the need and the size of private involvement on local waste management

The first step to perform a good and effective procurement procedure relies on the assessment of the needs and demands for new or improved waste services, and whether private sector can be involved to address the needs and demands. It is important to identify the potential of private sector or privatization process assuring more investments, improvement on effectiveness and efficiency, as well as in terms of skills, experience, assets, access to credit, and manpower. If is possible to have similar cases to assess the capacity of the private sector as a service provider in competition with public company.

The analysis proceed with conducting a detailed and comprehensive pre-privatization cost analysis of the services to be privatized or contracted and the assessment of the affordability of various service options, considering both capital and operating costs.

Finally, the local authority develop a private sector participation strategy, determining which services are to be privatized, which method of privatization to use, the size and duration of private sector participation agreements to be developed, and the schedule considering optimum sizes for collection zones, transfer stations, and disposal facilities, considering economies of scale and distances to final treatment.

Step 2: Employ needed human resources: comprising technical, economical and legal experts. In line with existing legislation on public procurement and concession, local authority should establish borders/ commission to prepare and facilitate tender documentations and another one for the evaluation of bids. The commissions should be approved by head of local authority. The involvement of the external experts is encouraged if the internal resources are missed.

Step 3: Determine legal, regulatory and technical requirements

(i) Determine Legal Requirements: In compliance of the existing legislation and local regulation, local authority (legal expert) should determine terms and conditions of tender development and of the future contract. This includes also any additional requirement which

(ii) Supporting documents: This includes the required documentation and proofs that the bidders should provide in support of their proposal and comprise licenses, contracts or proof of ownerships upon vehicles, facilities, and others in accordance with existing legislation and any supplementary demand by local authority itself.

(iii) Obligations of the service provider: The general and supplementary conditions of the future agreement, together with the technical specifications, specify the obligations of the service provider. This includes: The quality and type of service; Frequency and method; required standard of cleanliness of the collection zone, the required types and minimum numbers of collection vehicles and containers to be used, and the required condition of this equipment; compliance with relevant local, state and national laws, ordinances, codes and regulations; Maintenance of appropriate health and safety standards during operations; Reporting requirements and inspection, etc.

Step 4: Determine the scope of work

The procedure follows with the determination of the scope of work. Different type of privatization or contracting as well as the category of waste management services involved content different scope of work elements. The following are the basic elements which a municipality/ or commune invites bids for services of public disposal of municipal waste:

(i) General information on the cleaning zone: This information involves population and number of businesses, institutions, industry, and tourism activity located within cleaning zone or either close but affecting the services; / waste generation rates for each waste source/ Location and distances to final disposal or final treatment facilities option; / the general information content also population and business density, road and traffic conditions- access road conditions that might affect collection equipment/ the climate, and other conditions affecting required frequency of service etc. It must be clearly defined with information is contractual (collected zone, minimum waste quantities, km of streets to be cleaned, position of the landfill and

transportation distance, frequency, number of collecting points or maximum distance to the inhabitants, etc) and which is only estimation with indication values (population, number of businesses, waste generation rates. The number of sources of future negotiations or contestations must be reduced to a minimum,

(ii) Plan of the cleaning zone: Develop a base map showing contracted area and its borders, all streets and major features (typology of buildings, residential, institutions and commercial areas) of the city for the zoning exercise, location of waste facilities within or close to city border, show road access and constraints to different types of vehicle movements; In addition, the local authority should design the minimum number and positions of public waste collection points (network) and street to be served with waste services based on the national and local rules road infrastructure, urban typology, and characteristics of urban space.

(iii) Volume and characteristic of work: Initially it needs to be determine the type of waste and cleaning services involved in this contract, e.g., waste collection and transportation, streets sweeping or washing; Then, based on the information of the cleaning zone and the methods developed at Module 1(waste generation, composition) as well as by using other measurement tools (GIS), estimate the volume/weight of waste to be removed, transport, transferred and/or disposal/ Waste characteristics; determine the type of waste forming object of the contract and exceptions from the rule/ as well as the square of streets and open area that need to be cleaned and frequency of services.

(iv) Contract duration: Even if it is pre-assigned at the evaluation phase it is recommended to take in account other features explored during “scope of the work” phase and takes a final decision.

Step 5: Performance indicators and sanctions

By quantifying the performance measures to the maximum extent possible, accountability among service providers is increased. In this regard a set of performance indicators should be developed to measure and assess the level services.

Sanctions are typically penalties for each type of failure, the size of penalty increasing with each repetition of the same shortcoming. After a specified number of failures and related sanctions, the contract typically allows the local authority to cancel the contract (last and very theoretical solution because of the very bad effects on the service). Some examples of service provider failures comprise: irregular or unreliable service; use of unqualified operational personnel or inadequately maintained equipment; noisy, messy, or polluting working practices; inadequate or inappropriate response to valid complaints; clandestine dumping, spillage, or littering etc.

The sanctions must be based on a short analysis of the most important risks for the sustainability of the quality of the service, and only the most critical points must be concerned to avoid to build a too complicated model.

Step 6: Determine technical specifications of waste services⁴

During this step is required the development of the technical and performance specifications for procurement documentation including at least the following actions:

- (i) Determine type and minimum number of containers;
- (ii) Determine type and characteristics of vehicles, fix facilities required;
- (iii) Methodologies, technologies for waste collection and disposal or others; (transfer/ segregation, etc); a certain liberty in technological choices can be let open for the companies to present their own and better solution.
- (iv) Measures for public awareness (general and/or specific requirements);
- (v) Health and safety measures including emergency procedures (general and/or specific requirements).

Step 7: Estimate tender's economic value⁵ (estimate services costs)

Is one of the important issues on tender preparation and requires accuracy and concern in achieving local authority objectives. The financial and technical experts should conduct a comprehensive financial analysis (cost estimation) of the solid waste collection and disposal systems (including pre-collection, recycling, transfer, streets cleaning as defined at scope of the work in line with chosen technology). This shall include the estimation of operational and capital costs as well as maintenance and depreciation expenditure for vehicles and equipments.

Step 8: Prepare pre-qualification and evaluation criteria

All the criterions except of the economic proposal will be determined in terms of quantity and quality for assessing the offers. These criterions will be expressed on monetary terms or in qualification/ disqualification decision (pass/fail).

Step 9: Verify the technical proposal

After ranking the preferable contractors based on their financial offer and possible other technical criterions, and prior signing the contract, the local authority should verify the technical proposal in line with requirements and formal offer. The private bidder should provide enough proof including additional documentation, and would allow field verification for vehicles or fix facilities if required to assure the fulfillment of the contract.

⁴ For more details refer to Module 1

⁵ For more details refer to Module 3

b) How to choose the best one?

Selection criteria, which could be used for evaluation of solid waste sector tenders, are listed below. If a pre-qualification exercise has been conducted, some of these criteria would already have been addressed and would not need to be repeated at this stage.

The recommended method for evaluating tenders is the two offer system. The first offer contains the technical details of the proposal, and the required documentary evidence. Any tender proposal that does not meet with the technical or documentary requirements is rejected, and the second economical offer from such bidders is not opened. The satisfactory bids may be ranked according to their technical merit. Then the second economical offers of satisfactory tenders are opened, and the company offering the lowest price bid is invited for negotiation. A specific analysis must be conducted for controlling if the best offered price is reasonable or if it doesn't allowed to permit the required service.

(i) Criteria for qualifying and evaluating technical proposal for procurement of operation, services and maintenance services

Minimum criteria for pre-qualification:

1. Demonstrated experience in the service required (waste collection, transport, transfer and disposal) involving an annual turnover of at least Lek..... (or equivalent), over each of the last Years.
2. Demonstrated experience in the management of labor and equipment operations and the maintenance of a fleet of vehicles comparable to the type required for the project and involving an annual turnover of at least Lek, (Or equivalent) over each of the last years.
3. Experience in managing contracts for public services, involving an annual turnover of at least Lek..... (or equivalent), over each of the last Years.
4. Proof of possessing professional capabilities including official licensing by Albanian authorities.
5. Audited balance sheets for the last..... Years, which demonstrate financial soundness and long-term profitability;
6. Proof that has regularly paid national and local taxes;
7. Proof of absence of arrests, litigation or arbitration history;
8. Proof that confirm access to, or ownership of vehicles, fix facilities proposed (at least in compliance with those required);
9. Access to, or ownership of, liquid assets, unencumbered real assets, lines of credit and other financial means sufficient to meet the cash flow of at least months of the proposed work, or at least \$ (or equivalent) over each of the last years;

Technical offer: (sometimes to be used for quality ranking)

10. Detailed project of operation and services, including methodology, technologies, appreciation of requested labor and equipments, in compliance with bid requirements and probably significance improvements
11. Detailed project of maintenance;
12. Number, qualification, and experience of key personnel, relevant to the range of professional skills and levels of competence required for the project;
13. Number, size, condition, and appropriateness of equipment and vehicles of the type required for the project;

(ii) Evaluation criteria for a concession tender

The criteria for the evaluation and comparison of the technical proposals at concession tender shall include at least:

- Technical reliability;
- Compliance with environmental standards;
- Operational efficiency;
- Quality of services and measures to ensure their continuity;
- Social and economic development potential offered by the proposals.

The criteria for the evaluation and comparison of the financial and commercial proposals shall at least include, as appropriate:

- Present value of the proposed tolls, unit prices and other charges over the concession period;
- Present value of the proposed direct payments by the contracting authority, if any;
- Costs for design and construction activities, annual operation and maintenance costs, present value of investments and operating and maintenance costs;
- Extent of financial support, if any, expected from a public authority of the Republic of Albania;
- Soundness and viability of the proposed financial arrangements;

c) Finalize contract for services (Duration of contract, timing of procedures)

In a contractual agreement between public authorities and small private enterprises, all relevant elements of the service to be delivered have to be defined and agreed upon. The contract should address especially the following aspects:

(i) Scope of the contract:

- Exact definition the area to be served (e.g. street names)
- Duration of the contract (e.g. three years, annually renewable)
- Waste, object of the contract and exceptions

(ii) Specification of the services:

- Description of the type of service (methodology/ technology and rules) (e.g. collection of domestic refuse, street cleansing, transport to a landfill)
- Frequency of the service (e.g. daily, twice a week, etc)
- Schedules of services
- Measures for public awareness
- Modalities of negotiations for future adaptations of the contract relevant for changes in the scope of the service : evolution of quantities, of zones, of time-tale, of waste selection or transportation, etc.

(iii) Payment/ billing

- Contractual payment (including depreciation), frequency and indicators.
- Conditions relating to overdue payment (e.g. cost increase due to bank charges)
- Conditions for inadequate service delivery (e.g. payment reduction, penalties, cancelling of contract)
- Conditions in case of late payments (interest)

(iv) Supervising and monitoring

- Establishment of a supervisory committee (e.g. consisting of representatives of each party involved)
- Indicators of performance
- Sanctions and penalties

(v) Legal aspects and conditions

- Prohibitions
- Sub-contracting restrictive/conditions

7. HOW TO CONTROL THE QUALITY OF SERVICE?

7.1 Monitoring and record keeping

For a short and long term improvement of the waste collection system, it is of high importance to accumulate information and experience about the SWM system. At short term it will aloud to adapt the system to the real needs of the commune, considering its evolution, and at long time it will permit to build a more precise and optimized future bidding process for the next contractual period.

For this, we must establish and maintain records on all the major items, as on the quantities of wastes collected and their variation within a week, month and year, on real time-table of work, on km of collection and transportation, on charge of the vehicles, as well as on established long-term trends in solid waste generation rates and composition, sources of wastes and the personnel collecting them.

The collection and the transmission to the authorities of these “strategic” information must be clearly established in the contract, because the company will not give it if it is not contractual.

Long-term trends in solid waste generation rates and composition form the basis for planning, especially in budgeting for future vehicle requirements, allocating the collection vehicles and crew, building transfer stations, acquiring strategic lands and determining disposal options. The following table contains an illustration of a checklist of factors that affect the waste collection system:

Checklist of Variables Affecting Collection System⁶

Components	Factors to Consider
Crew size	<ul style="list-style-type: none"> • labour cost • total distance of collection • distance between containers • number, size and types of containers • loading accessories available in the truck • collection vehicle used
Container type	<ul style="list-style-type: none"> • solid wastes generation • density of waste generation • street width • traffic volume • loading accessories available in the truck • standard of living
Collection accessory	<ul style="list-style-type: none"> • labour cost • protection of worker’s health
Vehicle size/type	<ul style="list-style-type: none"> • solid waste generation • distance of transportation to the landfill or to a transfer station • street width, traffic volume
Collection route	<ul style="list-style-type: none"> • street width, traffic volume • direction of traffic flow • solid waste generation • spatial distribution of wastes • local topography
Transfer station	<ul style="list-style-type: none"> • distance between disposal site and collection area • hauling cost for small and large trucks • cost of transferring the solid wastes from small to large trucks

⁶ Source: Phelps, et al., 1995

Records of personnel and quantities of wastes collected are, when maintained, useful in determining the efficiency of the personnel and in correlating waste quantities with conditions in the service area. A time keeping system at garage and at the transfer or disposal site is a key element in improving the efficiency of collection system and planning an upgraded system. The timekeeping system determines the evolution of time used to full the truck or to do the required collection service. It allowed also a necessary control of the crew, if taking long rest periods, spending time salvaging or carrying out unauthorised activities. The performance of a particular crew in terms of the quantity of solid wastes collected per hour (or in terms of number of ours to full the truck) could be compared with that of another collection crew working under similar conditions and allowed to find ways of improvement. Improvement is not only to related to the involvement of the crew but most of all in the correct number and state of the bins in the collecting points. Information about time of filling the truck is a good indicator of probable insufficient number of bins or inadequate storage of waste.

Municipality through its municipal departments should monitor waste generation, keep records (on types, quantities of waste they generate, re-use, recycle, recover, hold, transport, dispose, or incinerate) and publish the related information. A weighting scale should be installed at dumpsite entrance and a 3-shift reception service will register every truck discharge there. A municipal registry on waste should be taken and updated by local authorities.

The municipality or commune should develop systems of measuring and recording statistics in order to identify trends in waste production and improve waste management decision making. A waste composition survey can be used to help to determine the quantity and composition of municipal waste, especially prior decision making on waste technology solution. The same line of analysis holds true in specifying the collection vehicles. Comparison of the routes taken by various crew serving a particular area helps to identify the best hauling route. Although this route may be longer, it could be more economical in terms of hauling time. However, note that the best route often changes with the season.

All these decisions should be based on reliable data, which allowed step by step to increase the efficiency of the waste collection system. Proper interpretation of monitoring data allows the authority to adapt the proposed system to actual or future conditions. In some instances, it also allows management to identify areas, where the design is not realistic and has to be adapted.

7.2 Control of collection and transport operations

The control of collection and transportation operations as well as for other waste management processes such as waste transferring, disposing or waste treatment aiming to:

- a) Ensure that procedures to monitor operations for compliance with applicable legislation and contract, regulation are fully implemented;

- Indicators (Performance indicators)
 - Rules, restrictions,
- b) Ensure that threats to the environment from wastes are recognised, minimised by prompt measures, and recorded accurately;
- c) Ensure that adequate resources for waste collection and transport are available and operational:
- Organization (supervising and monitoring personnel and clear procedures)
 - Indicators (Performance and indicators)
 - Register (trucks, bins, landfill, etc.)
 - Tasks

The municipality or commune, or persons authorized on its behalf, are entitled to control and supervise the manner of implementation of technical and hygiene requirements of waste disposal in accordance with the terms and conditions enshrined in the contract agreement with the undertaker or in the public company terms of operations.

7.3 Monitoring system cost and performance:

Collection, transport and transfer facilities should develop and maintain an effective system for cost and performance reporting. Each collection crew should complete a daily report containing the following information:

- Total quantity hauled.
- Time of going out of the depot, of beginning collection, of arrival and going out of the landfill, time of going back to the depot.
- Total distance of the day.
- Amounts delivered to each disposal, transfer, or processing facility.
- Waiting time at sites.
- Number of loads hauled.
- Quantity of fuel charged.
- Vehicle or operational problems or operation needing attention.

Collected data should be used to forecast workloads, truck costs, identify changes in the generation of wastes and recyclables, trace the origin of problematic waste materials, evaluate crew performance and control/avoid robbery of fuel or work time. Just as the goals of a collection programme set its overall directions, a monitoring system provides the short-term feedback necessary to identify the corrections needed to achieve those goals.

Normally it is very interesting to define one or more inspector, depending of the size and time table of the service, in charge of controlling the quality of the service. For being efficient he should be equipped with a bicycle or a motorcycle and a mobile phone so that he can report immediately any problem.

Performance monitoring measures for solid waste collection operations

Performance measures	What is measured	How is it measured	Where is it measured	How often is it measured	By whom is it measured	Basis for sanction
Cleanliness of service areas	Existence of litter Existence of <i>clandestine</i> waste piles Waste in drains Regularity and frequency of collection service Cleanliness around <i>communal</i> containers Completeness of collection service, number of collection points un-served False loading of vehicle with water, stone, etc. to increase payments Construction waste in the streets.	Zone inspection reports Customer complaints register	Service zones	Daily	Supervisors, inspectors of local authority	Yes
Safe disposal of collected wastes	Waste quantity delivered at official site Clandestine dumping	City-wide inspections Records at disposal site Complaints by witnesses of clandestine dumping	City-wide Disposal sites	Daily	Supervisors, inspectors of local authority	Yes
Customer satisfaction	Perception about cleanliness of zone Willingness to pay Willingness to participate with collection requirements Education of customers with inadequate practices	Surveys of customer satisfaction Surveys of willingness to pay	Service zones	Semi-annually	Company Local authority officials/ NGO/ inspectors	Yes : sanction for inadequate practices
Customer dissatisfaction	Complaints about improperly placed waste bins, damage of waste bins, uncollected wastes, rude behavior by collectors, poor appearance of collection vehicle and collection crew.	Zone inspection reports Records of complaints Records of follow-up of complaints Records on attainment of service frequency targets	Service zones	Weekly	Company Local authority officials, NGO inspectors	Yes
Worker productivity	Number of workers in service Waste quantity per worker each shift Absenteeism Appropriate working equipment and practices	Zone inspection reports Records at disposal sites Vehicle log books	Service zones Disposal sites	Daily	Company * Supervisors,	Yes
Vehicle productivity	Number of vehicles in service Waste quantity per vehicle	Records at disposal sites Vehicle log books	Service zones Disposal	Weekly	Company *, Supervisors, inspectors	No

	each shift Waste quantity per vehicle each day Vehicle <i>downtime</i>	Zone inspection reports Load inspections at landfill	sites		of local authority	
Quantities, position and maintenance of bins	Damaged bins to be repaired Improperly placed waste bins Insufficient bins on collection points (with presence of waste in the streets) Weekly washing of communal containers	Zone inspection	Service zones	Daily	Company * Supervisors, inspectors of local authority	Yes if the responsi bility of the compan y
Recycling achievements	Types of <i>secondary</i> materials recycled Quantity of secondary materials recycled	Zone inspection reports Records from sales of <i>recyclables</i>	Service zones Records from service provider	Monthly	Supervisors, inspectors of local authority	No
Environmental Controls	Exhaust emission control of vehicles <i>Sump tank</i> control of leakage from wastes in vehicles Control of litter from vehicles Daily washing of vehicles	Vehicle emission inspection reports Zone inspection reports Complaints about vehicle emissions and litter	Service zones Records from service provider	Monthly	Company *, Supervisors, inspectors of local authority	Yes
Occupational health and safety controls	Use of gloves Use of respiratory masks Use of uniforms Tools on vehicle to load loose waste Annual medical checks Provision of vaccinations Control over size and weight of lifted loads Operational status of vehicle lights (night lights, brake lights, and reversing lights) Number of accidents Adequate accident liability coverage (insurance) Cleanliness of vehicle and personal Use of alcohol in working time	Zone inspection reports Survey of workers Medical records Accident records Insurance policies	Service zones Records from service provider	Daily, weekly	Company, Supervisors, inspectors of local authority	Yes
Fair labor practices	Wages paid - minimum or above Payment for overtime Medical expenses coverage Vacation and holiday allowances Adequacy of work breaks Proper hiring and justifiable termination procedures	Zone inspection reports Service	Service zones Records from service provider	Yearly	Company * Inspectors of local authority	Yes
Hazardous waste segregation	Refusal to collect <i>hazardous</i> waste Provision of special collection for household hazardous waste	Zone inspection reports Inspection of loads at disposal sites	Service zones Disposal sites Records from service Provider	Monthly	Company * Supervisors, inspectors of local authority	Yes
Fuel consumption	Fuel records showing consumption per kilometer	Vehicle log books Workshop vehicle	Service zones	Monthly	Company * Supervisors,	No

	and per tonne Maintenance records on engine calibration Route rationalization	records Zone inspection reports Route plans	Records from service provider		inspectors of local authority	
Reliability	Downtime of vehicles Number of accidents Worker strikes Absenteeism, illness and accidents of workers	Vehicle log books Workshop's vehicle records Medical records	Service zones Records from service provider	Monthly	Company * Supervisors, inspectors of local authority	No
Communication	Notification of service problems Continuous radio accessibility Use of designated routes so vehicles can be located	Correspondence files Zone inspection reports Radio functioning between all trucks and central offices Adherence to route plans	Letters from service provider	Monthly	Company * Local authority officials	No
Finance	Payment of LGU property, income, VAT, and corporate taxes, etc., as required Regular payment of fair wages and benefits to workers	Financial records Reports of independent auditor	Records from service provider	Yearly	Local authority officials	Yes

* The company should – contractually - give this information to the supervisor every month.

8. RULES AND REGULATION

a) Importance of local regulations

It is important for municipalities to have a number of local regulations or by-laws generally defining the role of waste generators and waste operator, the responsibility of controlling and the sanctions.. Examples here would include anti-litter and anti-dumping by-laws, fees to be paid for MSWM services or a by-law requiring wastes to be presented for collection in a specific manner. By-laws can also specify certain penalty levels say for littering or illegal dumping.

In the frame of completing its waste management legal framework, local authorities should prepare and approve regulations, procedure and utilizes guidelines which will ensure a successful waste management within its administrative territory.

To ensure the successful private sector participation and the sustainability of the waste management sector, an institutional and regulatory reform is needed. This reform may be designed around the proper and clear division of functions among the various institutions involved in the waste management sector, most importantly defining who should regulate, and also around the definition of clear and sound technical and environmental standards, which will secure improvement of service quality and strengthen financial health of the sector.

b) Prepare a waste management regulation

The municipality is in charge to compile its own waste management regulatory, which determines rules for municipal waste management and city cleaning in the administrative territory, compiles procedures for citizens' complaints treatments, organize control, and also the chapter of applicable sanctions. The regulation should be approved by the City Council.

A common Waste Management Regulation (WMR) may content:

(i) General dispositions (Purpose, terms, waste classification, etc)

(ii) Working and quality standards, methodologies and technologies, health and safety procedures of waste and cleaning services: Development of local standards is very important for measuring the quality and assuring the effectiveness and efficiency of public services on waste. Local standards have to be relying on national standards or should be developed by local authority themselves if national models are missed.

(iii) Rules and Obligations of waste producers (inhabitants, businesses, industry, institutions)

Some duties on general public:

- No damage of the bins; prohibition of fire; change of destination of bins; damage and change of destination of the designated places for waste collection; control by police + inspectors and sanctions.
- Discard of waste; No throwing of waste on the floor, into water courses and storm drains; No burning of waste in waste containers, in the streets nore in private areas inside the service zone; No littering of waste in public or private territories; control by police + inspectors and sanctions.
- Avoidance and prevention of abusive discard of voluminous waste, hazardous waste or construction waste; disposal of dead animals and noxious materials; control by police + inspectors and sanctions.
- Obligation to transport construction waste in specific defined areas at the cost and responsibility of the owner. control by police + inspectors and sanctions.
- Avoidance of parking vehicles in front of/ or close to the designated places for waste collection; control by company, police + inspectors and sanctions.
- Clean space around shops or ambulatory selling points; Hygiene and disinfection of containers and waste stores; control by police + inspectors and sanctions.
- Payment of local tariffs and taxes on waste;
- Other public health matters.

(iv) Rights and Obligations of waste holders (waste operators, waste industry)

Some duties of Waste Contractors in addition to the obligations above:

- Operation to be carried out only by licensed contractors;
- Administrative procedures for issue and revocation of licenses;
- Payment of charges (tariffs, taxes) levied by the local authority;
- Use of appropriate vehicles and containers;
- Use of licensed disposal sites; control by police + inspectors and sanctions.
- Register of customers served;
- Keeping of waste records;
- Prevention of public health nuisance;
- Other public health matters such as health, safety and emergency procedures.

In addition to the general obligations above:

- Recycling and recovery only in approved locations;
- No cutting and burning of PVC cables and other materials; control by police + inspectors and sanctions.
- Controls on metal smelting, cutting and welding;
- No illicit deposit of effluents or liquid wastes;
- Storage of recycled materials;
- Disposal of discarded materials at licensed facilities;
- Other public health measures

(v) Waste Fees/ Tariffs, taxes and their collection on local level: Sometimes local governments need to establish a separate regulation on waste tariffs and taxes which anticipates and facilitates the process (steps) and rules from their setting toward effective fee collection. This regulatory aims to establish a cost recovery system for waste management by determining the policy for cost recovery service in the respective administrative territory. The tariff regulation represents a long-term policy for cost recovery, periodically increasing the applied tariffs, determining the amounts subsidized from the municipality within a determinate term. Meanwhile the WMR should content basic rules and procedures which are necessary to rule the process.

(vi) Public relationship and awareness campaigns: Main procedures and tasks of the municipal structures, inhabitants and businesses/ public complaints and feedbacks procedures are defined at WMR. A detailed program needs to be developed locally or regionally to enable this process.

(vii) Enforcement and sanctions: Accompanying by local regulation on waste management, a set of penalties and sanctions will be determined and approved at City Council. According to the Law on Waste Disposal the following activities shall be considered as violation of the law

provisions. A clear responsibility must be given by the council to the police forces and to the inspectors / supervisors given those orders and ability to control and sanction bad practices of citizen and companies in waste management. The role of police is important as a representation of the legal order : nobody should has bad practice in presence of police without a immediate and proportional reaction. The reaction in case of violation of legal regulation must be exactly the same in case of violation of traffic or waste regulation.

Municipality has the right to set its own penalties and sanctions levels or to extend the range of violation activities based on its waste management services and the “polluter pays” principle that the violation should be punished in order to take in consideration cleaning or collection costs, environmental costs or damages and furthermore to provide a fair system, to discourages and prevent polluters. While the municipality should consider the overlaps in the imposition of fines between those violations noted in the Law on Public Health and Sanitary Inspectorate and in the Law on Solid Waste Management when determining the local fines; All amended legislation that regulate and clarify the above overlaps will help to further improve local legal framework and its enforcement at local level.

c) Strengthen enforcement

The enforcement of legislation and increases in punitive measures against transgressors of environmental legislation is undoubtedly needed. Law implementation and enforcement require at the same time awareness or changes of the general approach towards the environment. This would be feasible also through improvements of legislation and communication.

An enforcement local structure (Municipal Inspectorate) is required by the law and its functions and responsibilities on waste control are determined at waste legislation. The main responsibilities relies on imposing sanctions to persons or juridical entities violating the legal requirements in relation to municipal waste collection, removal and transportation (art. 35, 36 of the Law on Waste Disposal) as well as according to the upcoming waste management regulation and list of penalties and violations approved by City Council.

A series of enforcement campaigns to address specific problems will be needed. Communication and information tools should inform the community about rules and violations what is allowable and what is not. Brochures of rules and penalties shall be distributed on neighborhood level, to businesses and to education institutions by groups of volunteers or students.

A continuing cooperation and partnership is required between local government and governmental agencies in managing special waste and municipal waste, monitoring environmental conditions and in application of enforcement actions.

d) Environmental licensing

A successful application of local framework and its enforcement will also require improvements in the system of environmental licenses, which constitutes the main mechanism of control.

According to the national legislation:

- Municipality should cooperate with the REA when issuing environmental approvals to persons carrying out a waste management project or activity (art. 25 of the Law on Solid Waste Management);
- Grant the approval for the hazardous waste dumpsite for purposes of obtaining an environmental permit (art. 13 of the Hazardous Waste Law);
- Control continually the fulfillment of legal requirements in the waste management activities (including not only municipal waste but also construction and other non-municipal waste). In this respect it should also receive periodically reporting from the persons engaged in these types of activities.

9. INFORMATION AND COMMUNICATION

9.1 Importance of information and communication on waste management and public involvement

In order to have an efficient and well-functioning waste management system, it is important that the public understands the system and supports it and know the objectives, the rules of best and bad practices as well as the sanctions. The success of any recycling scheme relies almost completely on the support among the users, e.g. the households, business or residents can greatly affect the performance of the collection system by cooperating with set-out and separation requirements, and by keeping undesirable materials, such as used oil, from entering the collected waste stream. To sustain a long-term programme support, the public needs to know clearly the purpose and necessity of desired behaviors.

How does a local authority convince a citizen to separate and throw a recycling material at an appropriate bin or at recycling centre, if he or she could just dump them in a common waste bin?

There are several ways of raising public awareness on waste issues and providing information on how they can be dealt with. In particular attention should be given to measures which:

- Provide general and specific information for the public regarding municipal waste collection, recycling, city cleanliness and other local initiatives;
- Enhance awareness of legal requirements, local rules and obligations;
- Promote environmentally friendly behaviour.

9.2 Information of SWM services

a) Providing public information

Informing SWM services users properly enables them to cooperate constructively with a new or on-going MSWM scheme. Maintaining good communication with the public is important to a well-run collection system. Residents can greatly influence the performance of the collection system by co-operating in separation requirements, and by keeping undesirable materials (e.g., hazardous materials) from entering the collected waste stream.

Commonly used methods of communicating information include brochures, articles in community newsletters, newspaper articles, announcements, and advertisements on radio and television, design and information on trucks and bins, information attachments to utility bills (either printed or given separately) and school handouts. Communication materials should be used to help residents understand the community waste management challenges and the progress in meeting them. Residents should also be kept informed about issues such as the availability and costs of the service of collection and on the landfill capacity so that they develop an understanding of the issues and a desire to help meet their waste management needs.

There are several categories of information, each of them equally important:

- Operational/ logistic information such as waste collection days, collection time, type and standard of dustbin, type of possible waste selection, solutions and sites for the elimination of specific wastes as construction waste, toxic waste, oil etc, phone number in case of question, etc. must be communicated clearly to enable users to comply;
- Measures that make stakeholders knowledgeable about the most important reason for proper SWM, the potential negative health and environment implications of improper SWM;
- Preparation for the future by informing children on environmental or health issues in schools to originate a generation of well informed adults in the future.
- Best practices en waste management, like private composting plant, recuperation activities, special cleaning activity, recycle solutions offered by commercial companies, or schools, etc. should be communicate and encouraged as much as possible by the authorities.

b) How to use trucks and bins for information?

On all the vehicles and if possible at the containers it should be written and clearly visible (letters shall be at least 10 cm) the slogan “Keep your town/city clean” or any other slogan , the phone number of the service provider and the green number assigned by the local authority, according to a format approved in advance, as well as the number of the bin to facilitate their maintenance and control.

In additions, on all the distributed vehicles and containers, there shall be clear explanations on the type of waste to be collected, the hours for picking up the waste and environmental awareness messages.

c) Green number

A calling center on waste needs and a green number are recommended to provide a useful tool on public relation. The calling center should be managed municipality, commune or service provider as soon as it provides a fast and convenient service to community and could help the well-functioning of new schemes (call schemes) which are introduced for collection of MSW, bulky and C&D waste according to the public needs.

d) How to inform about the tasks of the population/ about the necessity to pay?

Continuous attention for citizen participation and awareness rising remain crucial to any municipal activity and project on waste management. Municipality should follow a strong awareness campaign to all consumers especially to inhabitants advertising the waste collection service, rules, responsibilities and costs.

Especially if an element of local fee collection for Solid Waste Management services will be promoted, the active involvement of the local population is the key. This can be organized for instance by creating local/neighborhood environmental committees, performing awareness campaigns and as well as by providing extensive information on citizens' tasks and necessity to pay. The information about the service is needed to be explained to inhabitants what solid waste management actually costs. Although some people might think that solid waste management is free (because they are not billed specifically for SW services), others might overestimate its cost. It is also crucial that the waste services costs and tariff establishment process should be transparent and understandable to everyone. It should be emphasized that tariff payment and citizen's tasks fulfillment are fundamental issues on local waste management and cleanliness of the city.

e) How to avoid public opposition

There is a discussion on what local authorities should do to avoid public opposition even regarding the best environmental solution in a regional or local context.

The public opposition can partly be explained by the phenomena of NIMBY (Not in My Back Yard) and the lack of understanding of the alternative options, resulting in a general NOPE (Not on Planet Earth) approach towards establishment of any central waste management solution. Therefore many citizens do not have any faith in the ability of the authorities to manage central solutions such as incineration or bio-gas plants.

One suggestion recommended here is that the citizens should be included earlier in the decision making process. However, since the tradition for public participation so far has mainly consisted

in filing complaints against the authorities, it seems to be far to go before the stage of round table discussions.

9.3 Planning a public awareness and education programme

The process of developing an education and involvement plan/ program provides an opportunity to involve the community in the planning process at an early point. The education plan/ program must begin by introducing people to waste management needs and concepts, explaining clearly how to participate, and then effectively encouraging them to adopt the desired waste management behaviour.

Once the public participates in the programme, incentives and reinforcements can be used to maintain and increase participation rates. Programme developers must use different strategies for different groups, such as homeowners, apartment dwellers, business people and school children. An effective public education and awareness programme proposed at this module moves through 6 stages. (USEPA, 1995)

a) Awareness

At the awareness stage, people encounter a new idea or a new way of doing things. The goal of the awareness stage is to let people know that a different way of handling waste may be preferable to the historical way and those good reasons for considering a change in their waste management practices do exist.

A variety of methods can increase awareness, in which low-cost methods include news articles and public service announcements, or shows on radio and television and high cost efforts include television commercials or billboards. Over the long term, education in schools is the best way of raising awareness; the school curriculum must include the concepts of source reduction, recycling composting and other waste management techniques. Besides educating the next generation of citizens, school programmes indirectly help make parents aware of waste issues because children frequently take home information they have learned and discuss it with their parents.

b) Interest

In the second stage, individuals who are now aware of waste management issues seek additional information. They may seek one-to-one exchanges with waste management professionals, educators, and so on or they may seek information about how they are involved in implementing a waste management initiative or an effective public policy.

At this stage, programme developers may need a variety of methods to explain the programme. Making public speeches, offering tours of waste management facilities, creating exhibits for fairs and preparing written material such as newsletters can help stimulate public interest in the programme.

c) Evaluation

At the evaluation stage, individuals decide whether to go along with the programme. Even if the law requires specific behaviour, achieving voluntary compliance is easier administratively and politically than strong enforcement. An easily understandable and convenient programme will have the best chance of success. Research has shown that for even well promoted programmes, initial participation is about 50%. More people will participate when a programme has gone on successfully for a while and is well established.

To make this happen, education should stress the role of individuals in the programme, their contribution to its success and the most convenient level of participation.

d) Trial/ test

By the fourth stage, individuals would have decided to participate in the new activity. This is a crucial step for every programme. For example, if individuals try garden composting or a volume-based system and encounter difficulty, they may choose not to adopt the desired conduct, and the programme could lose political and public support. By this stage in the educational programme, therefore, everyone should have the information, describing exactly what they are expected to do.

Programme organisers should assure citizens that the pilot project's goal is to evaluate various strategies, respond to public feedback and make any changes required to improve programme efficiency and reliability. Citizens may be more willing to try a project, if they know whether the project is short-term and that any concerns they may have will be taken into account in developing a long-term effort.

During the trial stage, public hearings may be helpful by giving citizens an opportunity to voice their opinions about the project.

e) Adoption

If the education programme has been well planned and implemented, public support and participation should grow. Educational efforts at this fifth stage focus on providing citizens with positive feedback concerning programme effectiveness.

A newsletter or other regular informational mailing can help inform citizens about the programme's progress and any programme changes. Community meetings can serve to reward and reinforce good behaviour and answer questions. Local officials should be informed of programme participation rates to generate political support for programme budgets and personnel needs.

f) Maintenance/ Continuation

The support for the SWM program is secured and needs to be maintained through periodic education and awareness efforts. Incentives (intrinsic and extrinsic), in form of official recognition and awards, or occasional rewards may be given to the public to maintain and increase participation further.

Intrinsic incentives are largely information in nature, designed to induce citizens to perform the desired conduct and to provide a personal sense of well-being and satisfaction. Extrinsic incentives are tangible and direct rewards for performing the desired conduct, such as reduced fees or monetary payments. For example, the smaller the waste volume generated, the lesser the generator (of wastes) must pay for waste management. A maintenance programme may employ both the types of incentives, while continuing with basic education.

9.4 Tools for use in public education and awareness campaigns

Public Awareness and Education (PA&E) campaigns can take many shapes and forms. Just a few examples are information leaflets, public hearings, radio programs, advertisements, lectures and school curriculum interventions. Surveys of practices and/or awareness of waste management issues can be a useful first step in telling the community that action is being taken to improve upon the existing situation. To develop a successful PA&E strategy the most appropriate mix of tools for the city must be combined. The list below gives an overview of some of the many tools available that can be combined for this purpose, distinguished broadly by cost categories.

Methods of Publicity

Low Cost	Medium Cost	High Cost
News releases	Flyers	Commercials, T.V., radio
News advisories	Posters	Billboards
Public service announcements	Fact sheets	Media events
Community calendar announcements	Briefing papers	Calendars
Letters to the editor	Media events	Advertisements
News articles	Slide show	Public relations firm
Newsletter articles		Internet site
Speeches		
Guest spots on radio, T.V.		
Poster contests		

9.5 Feedback mechanisms

A related issue refers to creating feedback mechanisms: how is the population invited to provide feedback to the municipality on the waste service? Getting feedback on the organisation of collection and disposal is on the one hand necessary to make improvements to the service and on the other hand create sufficient trust among inhabitants that their opinion and ideas are taken into account.

a) How to give to the public the possibility of complain

A municipality or commune should develop systems of environmental monitoring and gaining public complaints. The community-based surveys or other feedback mechanisms will be

developed in generating useful data and information on waste service quality, willing to pay or other aspects of waste management and on gathering public complaints and needs.

The service provider should have an operational “Contact Office” for receiving the complaints. It shall be open each working day, e.g., in the office hours. Representatives of the service provider shall be present during all the established time to receive the remarks of the citizens and address the problems within five hours of receiving the notice.