



# Micro- and Small Enterprises in Integrated Sustainable Waste Management

Tools for Decision-makers  
Experiences from the Urban Waste Expertise Programme  
(1995-2001)

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Series editor:  
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**Cover photos:**

Photo 1: Child worker cuts pieces of tin cans, India. *Photo: @WASTE, Jan van Uden*

Photo 2: Waste pickers give collected waste to a junk buyer for weighing on a side walk in Hanoi, Vietnam. *Photo: @WASTE, Michael Di Gregorio*

Photo 3: Street with metal recycling workshops, Eritrea. *Photo: @WASTE, Maria Muller*

Micro- and Small Enterprises in Integrated Sustainable Waste Management is part of a set of five Tools for Decision-makers. The other four documents cover:

- Integrated Sustainable Waste Management - the Concept
- Community Partnerships in Integrated Sustainable Waste Management
- The Organic Waste Flow in Integrated Sustainable Waste Management
- Financial and Economic Issues in Integrated Sustainable Waste Management

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Gouda, May 2001

Arnold van de Klundert  
UWEP Programme director



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# Chapter 1. Micro and Small Enterprises for Decision-makers

## 1.1 Introduction

This document with tools for decision-makers is designed to help local authority decision-makers analyse the potential to use Micro and Small Enterprises (MSEs) and Community Based Organisations (CBOs) to perform part of their waste management work packet and to plan for this in the future. There is a lot of discussion these days about the importance of MSEs particularly in marginal urban settlements, but it is focused on documentation and research, or in some cases on actually preparing a micro enterprise to go to work. In this document with tools for decision-makers we choose to look at the 'MSE question' from the point of view of a local authority, helping you and your colleagues to understand the context and make a good decision.

### 1.1.1 A companion-piece to these "Tools for Municipal Managers"

This document is not designed to summarise nor to substitute for the GTZ-SKAT-ILO-WASTE publication: "Municipal Solid Waste Management - Involving Micro and Small Enterprises, Guidelines for Municipal Managers" (Haan, Coad and Lardinois, 1998). Readers are invited to read that document for more detailed information and case studies.

### 1.1.2 What is ISWM: Integrated Sustainable Waste Management

Integrated Sustainable Waste Management is a concept that has been articulated and refined in the Urban Waste Expertise Programme (UWEP). It is the result of working more than 15 years on waste issues in countries in the South, and coming to understand that it is not the technical issues, but the other aspects of waste that are most likely to influence the success or failure of interventions.

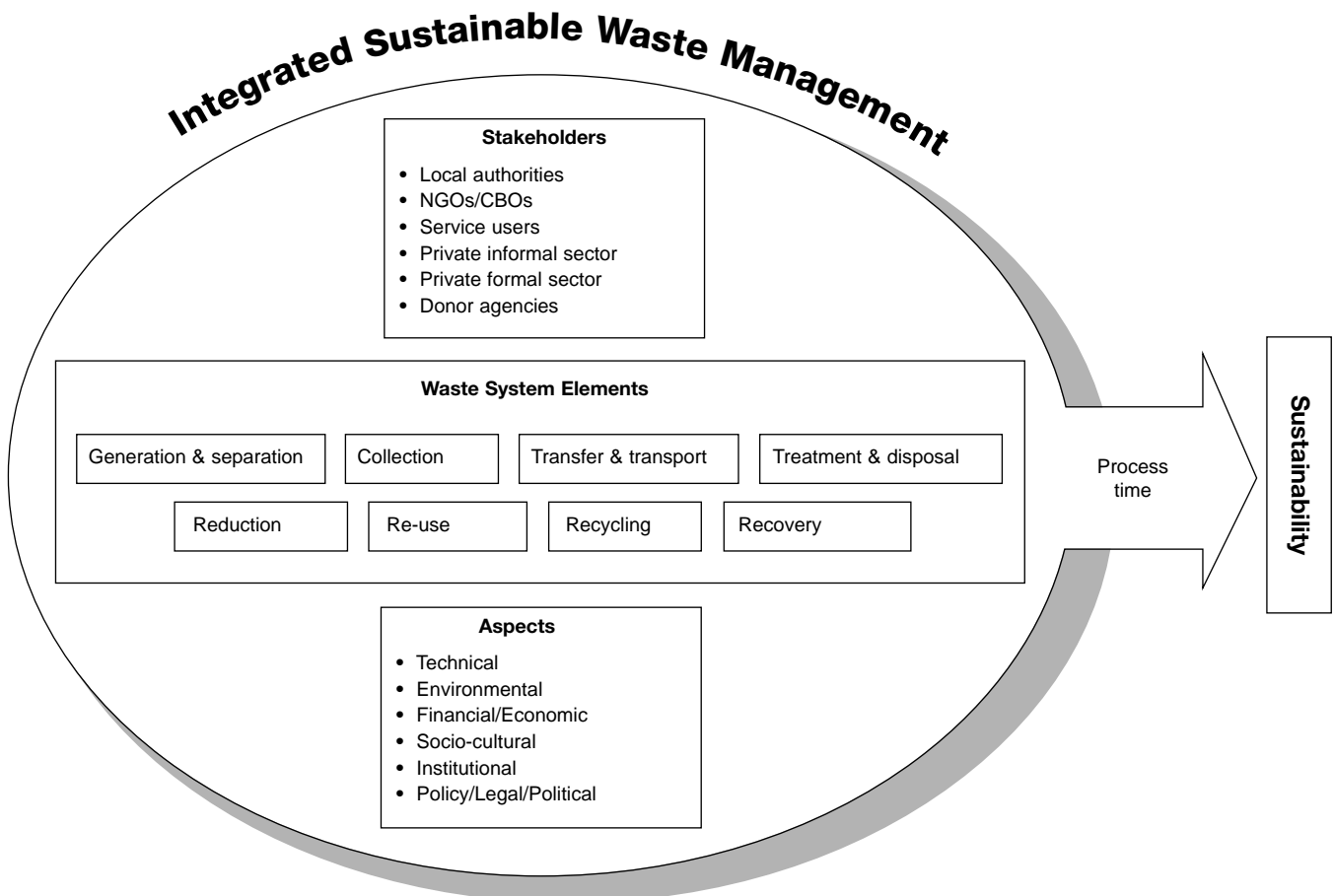


Figure 1. The three dimensions of ISWM: stakeholders, waste system elements and aspects.



WASTE has been developing the Integrated Sustainable Waste Management concept for multiple purposes: (1) as an analytic framework for understanding waste management systems; (2) as an assessment methodology for predicting feasibility and sustainability; (3) as a description of an urban development process. Figure 1 illustrates the three dimensions, six aspects and eight waste system elements of ISWM.

This document with tools focuses on Micro and Small Enterprises as important stakeholders in an urban waste management system.

## 1.2 What do we mean by MSEs in Urban Waste Services?

MSE is used in this publication to mean 'Micro and Small Enterprises'. There are a number of possible definitions of MSEs, but here we use the definitions in Table 1 as a general guide:

Factor	Micro Enterprise	Small Enterprise
# employees	1-10 workers, including the owner(s) (in some classifications, up to 20 workers)	11-20 workers including the owner(s) (in some classifications, up to 50 workers)
Capital	From own savings, loans from family and friends, use of family infrastructure	
Formal/informal	Usually not registered	Usually registered
Taxes	Often does not pay taxes	Pays taxes that cannot be avoided

**Table 1. Definitions of Micro and Small Enterprises**

*Source: Haan, Coad and Lardinois, 1998.*

In addition to micro and small enterprises, there are several other types of actors in urban waste management: community based organisations (CBOs) that provide services or are involved in activities in their own area, and waste pickers, who collect recyclables for their own purposes or for family income. This document focuses on micro and small enterprises, but many of the points made are also valid for the other two types of actors.

### 1.2.1 Micro and small enterprises: private sector actors

When we talk about micro and small enterprises in urban waste services, we are talking about a form of **privatisation**. In cities like Guatemala City - Guatemala, Bamako - Mali, Nairobi - Kenya, La Alajuela - Costa Rica, La Ceiba - Honduras, Lima - Peru, Bauan and Manila - the Philippines and many others, the local authorities have limitations on how much they can contribute to the operations side of the urban waste management system, even though they retain legal and regulatory responsibility for urban sanitation. In many cities in the South, the authorities may not have the resources to collect and dispose of all the waste; or there has been a policy decision to privatise waste management activities; or the authorities choose (or are forced by political pressure) to use their resources on other priority obligations. In these situations, the gap left by the public sector has resulted in the autonomous development of a **micro urban environmental sector**, which has seen and exploited a commercial opportunity to collect the waste, sweep the streets, recycle and/or clean indoor and outdoor spaces.

Some of these small businesses are informal – that is, they are not registered and they do not pay taxes. Others are registered but avoid paying taxes wherever possible in order to keep costs down. These micro businesses may be paid by the clients directly, or, in the case of recycling businesses, they are paid for the sale of the materials they extract from the waste stream. For a municipal authority, simply knowing that these micro and small enterprises exist – and having an inventory and analysis of their activities – is a first step.

### 1.2.2 Recognition from the local authority

In a number of these cities, the local authorities have taken the second step, of acknowledging the MSE and CBO sectors and giving these businesses some kind of legitimate status and recognition. Recognition and legitimisation take a number of forms. In some cases, the local authority can give the micro and small enterprises a franchise, concession or even a contract for the services

they are performing. This gives not only recognition, but it creates a formal management and control relationship between the government and the MSE.

At a slightly lower level of intervention, the city can require that the micro and small enterprises get permits; have their routes registered and approved; buy permits to dump at the landfill; register their vehicles; or in some other way get official approval for their work. This is a formal relationship, but it does not put the city in the position of managing the MSE: the relationship between Guatemala City and the 'yellow truck' collection MSEs fits into this category.

There can also be an official recognition, through announcing a 'public-private partnership' or through helping the micro and small enterprises get equipment or have access to the waste. Both the Linis Ganda programme in Manila, the Philippines, and the Street Waste Picker programme in Belo Horizonte, Brazil, fall into this category. Linis Ganda gives itinerant waste buyers uniforms and identity cards. Belo Horizonte's public works department publicises and celebrates the work of street waste pickers in festivals and theatre performances.

### **1.2.3 Institutionalisation of micro and small enterprises as part of an Integrated Sustainable Waste Management System**

And there is also a third step, which only a few cities have taken to date, but all of them with interesting results. This is the step of institutionalising the role of the MSEs (and CBOs) in waste management, by making a long-term plan based on integrating their activities into an overall Integrated Sustainable Waste Management (ISWM) strategy and expressing this integration in law, in regulations and in formal planning documents. It is this step – the integration of the MSE sector into an ISWM strategy – which is the focus of this publication.

## **1.3 Where has it been done?**

Examples of Step 1 are to be found in many, if indeed not in most cities in the South. Guatemala City's yellow trucks have been collecting the waste in that city since 1955. These one-truck businesses contract directly with clients and remove waste once or twice per week. Similar one- or two-truck businesses are common in Costa Rica, El Salvador, Honduras and other Central American countries.

### **Micro and small enterprises as a feature of the urban waste landscape**

Itinerant waste buyers have been a major feature of the urban waste landscape in Manila for more than 25 years. These are individuals who go from house to house and buy certain waste materials, which they then re-sell to a junk shop. Itinerant waste buyers are in some cases considered individual entrepreneurs and in some cases micro or small enterprises. No matter how classified, they are the lowest rung in the recycling chain. In Karachi, Pakistan, 93% of all households sell their waste to itinerant waste buyers, who provide the local opportunity for household recycling.

*Source: Ali 1993, as quoted in Lardinois and Furedy, 1998, p. 38*

### **1.3.1 Recognition and acknowledgement of micro and small enterprises**

Step 2 is also not uncommon. In Nairobi, a small enterprise that has been collecting under direct contract to the generators, is negotiating for a collection franchise in the City's industrial area. In Colombia, the National Association of Recyclers (ANR) has succeeded in leveraging several contracts for its members either with the municipal authorities or with the formal-sector private companies contracted to the authorities. In Belo Horizonte, Brazil, a partnership between the municipality and the street waste pickers has increased the recovery rate for recyclers (Lardinois and Furedy, 1998, pp. 119-121 and Dias, 2000, Conference presentation in Dessau, Germany).

### **1.3.2 Institutionalisation of micro and small enterprises in an overall ISWM strategy**

Step 3 is still rare and it is also sometimes not easy to distinguish from a general privatisation strategy. The fact that the Guatemala City 'Yellow Trucks' joined together to win a tender in Guatemala City in 1997 is one example of this occurring through the competitive bidding process. The Urban Waste Expertise Programme's pilot project in La Ceiba, Honduras, was designed to support a municipal commitment to an MSE-based urban environmental development strategy. The World Bank Africa Division is supporting this approach to urban service upgrading in Guinea-Conakry (Engineer Eustache Ouyoro, World Bank, personal communication,

February 2000). The UWEP pilot project on the island of Tingloy, the Philippines, is also proceeding in this direction. The Nairobi city council has signalled its interest in upgrading urban services in this manner. The Cairo Principles articulated after the UN Habitat conference in 1996 formally endorsed this approach (Haan, Coad and Lardinois, 1998, pp. 79-83.)

#### 1.4 What does it cost?

In general, MSE privatisation of waste collection appears to be slightly less costly (and a great deal more sustainable) than conventional privatisation. In part because the prices are set to what the market will bear, even when this does not result in enough income for the micro entrepreneur to cover the full costs of the operation.

“A key reason for considering MSEs for waste management is the financial saving that can result...The lower costs follow from the use of more appropriate technologies, such as handcarts and donkey carts, which require less investment costs and can have lower operational costs than motor vehicles.” (Haan, Coad and Lardinois, 1998, p. 12).

Specific costs in Latin America for collection and street sweeping services are difficult to pin down. There is good reason to believe that these costs are lower than conventional collection and costs, but few concrete examples can be cited to prove this. This is in part because the specific costs of MSE privatisation vary from city to city. Nevertheless, there is a good body of experience indicating that these services represent reliable, moderately priced alternatives to the municipal public service sector and the formal privatisation process.

##### **Micro private sector sustainability in Costa Rica**

In one municipality in Costa Rica, a conventional large-scale privatisation gave a large formal-sector enterprise the waste management collection contract with the local government. When the residents could not pay the new price of the service that the private company was asking, they decided to contract a local micro enterprise to do the job. With the support of the local NGO ACEPESA they started, three years ago, collecting waste in the entire municipality.

The micro enterprise has these goals: providing a service that is satisfying to the clients and creating jobs in the community (5 workers). The enterprise has the support of the local government and has shown initiatives in recycling materials. Every year the tariffs of the services are readjusted, according to the level of the costs of the service. This micro enterprise has survived the competition of the large enterprise during these years and now has been able to establish itself in this area.

## Chapter 2. The New Millennium: Era of Privatisation

At the present time, there is widespread interest in market-based solutions to the entire range of urban and social issues, which face countries in the South (countries in development), but also OECD countries and the former communist countries of Central and Eastern Europe (countries in transition), together with newly independent former Soviet republics. So-called 'mainstream' public management takes the view that these market-based solutions should be transferred – as much as possible in their entirety – from 'developed' country cities in the North to cities in the South. Since the countries in the North are going through a wave of privatisation, partly aimed at reducing national deficits and shrinking the public sector, this prescription is applied to countries in the South as well.

### 2.1 Privatisation: local government's answer to lack of resources

Privatisation often appears as a panacea to local government – a source of external financing, capital equipment and resources. When done well, privatisation does increase the capacity of local governments to provide reliable and appropriate services to all their residents. In urban waste management, that means that in every ward or neighbourhood there is some form of garbage collection; streets are swept; public and community spaces are maintained; latrines are emptied and the contents removed; and the like.

Local governments look to private enterprises to provide these services because:

- The private businesses have capital to invest in equipment.
- They are professionals in their area and can provide management and supervision.
- It may be possible to 'squeeze' extra work out of the contractor at the margin.
- If there is a problem, the local authority can blame the contractor.
- If there is a need to economise, it is easier to break a contract with a private business than to fire an employee who has civil service status.

For whatever reason, the model of privatisation, which is usually applied, involves a large-scale private company, often a local branch of an international firm. In Latin America, the phenomena of autonomous local privatisation is much older and represents a kind of traditional solution to the waste collection problem. We refer to this large-scale model as 'conventional' (in spite of bearing in mind that it is a relative newcomer in Latin America).

#### 2.1.1 Problems with applying models from the North in the South

In waste management, there are several problems with the idea of applying large-scale privatisation in the South – that is, with promoting and applying the same management techniques and technologies as are used in the North, in fact implemented by many of the same actors.

##### **Problem 1: The models work poorly and are inadequate in the North**

The first problem is that countries in the North are very far from having solved their own waste management problems – and solid waste management remains highly politicised, expensive and a source of significant pollution in these countries. Many expensive technologies (pyrolysis and mixed waste composting are two of the most striking examples) have been developed, adopted and abandoned as being non-functional or too expensive. That is, the models do not work well even in the countries where they were developed.

##### **Problem 2: The models are fundamentally inappropriate in the South**

Even where the models do work in the North – as in the case of collection with compactor trucks, a nearly universal approach to waste collection in cities in the North – they are often fundamentally inappropriate in the South, due to a range of factors.

First, the waste stream in cities in the South is different from that in the North: by weight it includes more than double the amount of organic compostable materials and far smaller quantities of packaging. Among the generally lower percentage of packaging materials, the percentage of plastic is correspondingly higher. Cities in the South also usually have a much higher percentage of sand, grit and dust in their waste, which adds to the density in the dry season and absorbs moisture in the wet season.

Given the high density and moisture content of this waste stream, compactor trucks, the standard in the North, are virtually useless in collecting this waste: it is already so wet and dense that compaction during collection makes little difference and may force liquid out onto the street. The operating costs for the compacting vehicles raise the baseline collection costs beyond the ability of many clients to pay.



**Photo 1. Household waste in the South consists of mainly organic material.**

*Photo: ©WASTE, Arnold van de Klundert*



**Photo 2. Child bringing waste to waste collector, El Salvador.**

*Photo: ©WASTE, Carlos Avalos*

Secondly, cities in the South do not normally have a large percentage of recyclables in their waste, since the informal recycling sector extracts a large percentage of the most marketable materials through container or landfill waste picking, itinerant waste buying and informal collection networks. Additional materials are recovered to provide the base for cottage-scale production of stoves, lamps, containers, and automobile and other vehicle parts. Northern collection and recycling methods tend to disrupt, rather than building upon, these existing activities.

Thirdly, Northern disposal technologies – such as centralised composting and incineration, as well as modern controlled landfilling – have high capital and operating costs. Even when the capital costs are supplied by donors, the operating costs are so high that many facilities, once they are built, are never operated.

Fourth, and most importantly for a discussion of micro and small enterprises, the demography, built environment, culture and economy of scale for waste management activities is fundamentally different in the South than in the North. In the South, the process of collection is more personal; the households, particularly in informal settlements, are too close together to allow motorised vehicles to pass; animal and muscle-traction vehicles are more suitable to the terrain and the demographics.

For all these reasons, cities in the South need their own models and micro and small enterprises are likely to be part of the most sustainable, long-term model.

### **Problem 3: International and large-scale privatisation is not a panacea**

Privatisation seems like a panacea, but it is very complex. Problems arise when local authorities do not realise or do not understand that:

- Private investors are looking to take out more money than they put in – that is why they invest in the first place.
- What a contractor sees as the goal of the investment is to have access to the paying taxpayers, customers or clients – and to get their money directly or indirectly.
- Businesses from outside the area or from the North do not understand the dynamics or local conditions.
- A private contractor knows more about negotiating a contract than the City government and they are used to getting what they want, including extra money for extra services.
- Accountability varies with the goodwill of the contractor and the kind of contract.
- If there is a problem, the contractor may tie the contract up in court.

### **Problem 4: The international private sector does not understand your city**

As the Costa Rica example shows, there are also specific problems with the international private sector, which have created difficulties for governments seeking that kind of privatisation. The first is a 'real investment' problem typified by the compactor truck example. Most of these companies claim they will invest in vehicles, but instead they import used compactors from Europe or North America. This is a financial trick: they claim the replacement value of the truck as an investment, but in most cases these vehicles are fully depreciated, so they actually recover the cost of the importation in tax credits. But now they have compactors and they try to use them in the South, where they are too expensive to operate and the waste stream is already dense enough not to need compaction.

Secondly, their ideas about labour-to-capital ratios come from their Northern experience – where labour is the most expensive production factor. This causes them to design and set up their systems to minimise labour and maximise machinery and equipment and fossil fuel use. In most countries in the South, this is a backwards approach: labour is the least expensive production factor, can be paid for in local currency, and should be maximised for social and political reasons. This includes choosing animal traction over motorised traction.

Fuel and spare parts are the most expensive production factors, and usually have to be paid for in scarce foreign currency. So a sustainable approach is one which minimises capital and energy inputs, and maximises labour and animal traction inputs to waste management operations.

Third, international private firms originate in countries where the informal sector has nearly disappeared – or has been integrated into formal commercial recycling activities. Experts from the North are unlikely to see – or understand – the importance of the informal waste sector in reducing the amount of waste and in keeping the city clean. They tend to see this sector as dirty and frequently want to 'get rid' of waste pickers and itinerant waste buyers and replace them with an image of modern, clean waste management.

## **2.2 Formulating urban waste goals and objectives**

Before deciding whether and how to involve the micro sector in the development or modernisation of urban waste management in your city, it is necessary to know what your constituents want, need, and are prepared to support and pay for. Some cities consider this to be a technical planning or engineering task, but waste systems are much more complex than this.

Several decades of failed urban development initiatives in the South have emphasised the importance of sustainability as a key criterion in waste management initiatives. Responding to this and to a decade of experience working on waste management and the micro sector in cities in the South, WASTE Advisers on Urban Environment and Development and its partners in the UWEP programme have elaborated the concept of Integrated Sustainable Waste Management (ISWM).

The diversity of experience within UWEP has had some surprising results, in particular, the realisation that the common factors from one place to another as relates to urban waste problems and solutions are much stronger than the differences. This does not mean that 'cookie cutter' solutions can be applied universally, but it does suggest that there are elements of a process of development which are common to widely differing situations. Experience within and outside UWEP indicates that ignoring these elements almost certainly leads to a failure of development or interventions, and while including them does not guarantee success, it does give a very

good basis for development and increases the chance for positive outcomes. This insight has led organisations in UWEP to articulate the concept of Integrated Sustainable Waste Management (ISWM).

### **2.2.1 What is Integrated Sustainable Waste Management (ISWM)?**

ISWM is based on the recognition that waste management depends on stakeholders. The practical side consists of eight waste system elements, which can be analysed through the lens of six aspects. The elements and the dimensions cross-cut each other in different ways.

The waste elements are the traditionally recognised parts of a waste management system: collection; street sweeping and litter control; transfer and secondary collection; recycling; composting; disposal. The six waste aspects include: policy and institutional; social and cultural; economic and financial; environmental; and system performance or technical. An ISWM goal-setting and planning approach integrates these six aspects with the elements of a waste system: collection, street sweeping, transfer and disposal.

### **2.2.2 Who are your constituents and what do they want?**

One of the first steps in an ISWM process is identifying the first ISWM dimension, your stakeholders and constituents, and involving them in the process of setting the goals for the system. Does everyone want door-to-door collection, or is a community container a better and more controllable option? Do the streets need to be swept every day or once per week? What other problems relate to the waste issue but may need to be addressed by other divisions?

### **2.2.3 What do your constituents already have and how is this different from what they want?**

At some point, usually early in the process, it is very valuable – in our opinion essential – to make a baseline analysis and diagnostic of the current situation. Specifically, this will give you important information about the existing informal MSE sector, and help you and the community in evaluating and optimising the existing activities and setting priorities for new services.

Through this kind of investigative and consultative process, you can identify gaps in the existing package of activities, and work with the communities and the service providers to fill those gaps. This is likely to be much less expensive than starting from scratch, as if there were nothing already happening. It also builds confidence of the existing MSE entrepreneurs and creates a better climate for cooperation in the future. Throughout the UWEP programme, the practice of acknowledging and building on customary activities has consistently shown itself to lead to the most sustainable urban waste systems.

### **2.2.4 From gaps to market niches to an MSE development strategy**

From identifying gaps and setting priorities, you can move to elaborating ‘market niches’, small opportunities for which some beneficiary – your constituents or some part of the municipal government – is willing to pay some amount on a regular basis.

The **willingness-to-pay study** substitutes for a normal marketing study in determining whether an MSE-based privatisation will be feasible. It is the stepping-stone to an MSE development strategy – knowing what the different elements of the system are and how much someone is willing to pay for each.

When you have finished this process, you should have a profile of 10 to 20 small-scale activities that are not currently being performed adequately or at all. Of these, experience has shown that the MSE sector can perform well in the following types of activities (Haan, Coad and Lardinois, 1998, pp. 17-19):

- Street sweeping, litter control and public space maintenance
- Beach cleaning
- Industrial and commercial cleaning
- Primary waste collection
- Transfer station operation together with recycling
- Disposal
- Separate collection
- Recovery and recycling
- Composting
- Operating a manual or relatively small landfill
- Operation of reuse and repair businesses
- Operation of second-hand stores

### 2.3 MSEs: Micro and Small Enterprises

Micro and small enterprises do not have the problem of adapting to the local circumstances. They arise out of these circumstances and they are mostly working with equipment, technology and approaches that fit the local condition perfectly. This is not to say that they cannot use help. One of the UWEP programme's central purposes has been to facilitate South-South technology transfer and capacity building.

Micro and small enterprises belong to a class of enterprises that we might call 'livelihood businesses'. Many times they depend for survival on the unpaid work of family members or the unrecognised use of family resources. Usually they do not make much profit – and some would actually be shown to be losing money when analysed in ordinary financial terms – but the operation of the business allows the family to survive.

Their connection to the community they serve also means that they are responsive to local needs, cooperative and not likely to use threatening tactics. Their investment ability is small, but so are the investment needs.

These small entities are more likely to be interested in true public-private partnerships, where the municipality provides or leverages money for capital purchases<sup>1</sup>. Under this arrangement, the MSE will not be looking to extract profits from the system, but to split these with the government.

#### 2.3.1 Community Based Organisations: neither fish nor fowl

Community based organisations (CBOs) represent another 'home-grown solution' to the problem of urban waste. CBOs are often organised for the purpose of cleaning or improving the community, rather than as a means of earning a livelihood. They may rely on donations and moderate their ambitions to meet the scale of available support.

#### 2.3.2 The informal sector

Some MSEs and CBOs have registrations and are businesses or organisations that pay taxes. Many other MSEs and CBOs are classified as being part of the informal sector, since their businesses or working teams are not usually incorporated or registered; do not keep formal books; and do not usually pay license fees or taxes.

In addition to MSEs and CBOs, the term 'informal sector' also includes waste pickers and itinerant waste buyers. Both of these terms refer to individuals – including children – who support themselves and their families by taking materials out of the waste stream for their own use and to sell. In our vocabulary, waste pickers are usually salvaging or being given the materials, while itinerant waste buyers are usually buying them in a semi-formal arrangement from families.



**Photo 3. Waste pickers at a dumpsite in Hanoi, Vietnam.**

*Photo: ©WASTE, Michael Di Gregorio*

<sup>1</sup> IPES, the Instituto para la Promoción de la Economía Social, in Lima, Peru, has coined the term 'social privatisation' to describe these micro-scale privatisation initiatives.



## **2.4 Micro and small privatisation: sustainable, home-grown and appropriate**

Privatisation based on optimising and legitimising the existing micro and small enterprise (MSE) sector has many of the advantages that municipalities seek when they are looking to privatisation to solve their problems, while avoiding many of the culture, scale and experience mismatches typical of working with the international or regional formal private sector.

Choosing MSE privatisation as one of your urban upgrading strategies will introduce sustainability into your waste management system. But making the decision is not enough, there are practical actions to be taken. The following chapter focuses on some of the aspects of implementing an MSE privatisation strategy, giving municipal managers practical information on what micro and small enterprises are, and how to think about and work with them. Additional information is found in the book by Haan, Coad and Lardinois (1998) referred to in Chapter 1.

# Chapter 3. Micro and Small Enterprises for Municipal Managers

## 3.1 Close to home: MSEs in autonomous local privatisation

Thinking about MSEs as the building blocks in an urban privatisation strategy gives the municipality the opportunity to create a more sustainable and integrated approach, which is the focus of this document. We can call this kind of a privatisation approach **autonomous local privatisation** and – unlike large-scale international privatisation – it provides a way forward that is consistent with the principles of ISWM.

The previous two chapters focus on making a decision whether to consider an MSE-based privatisation strategy for your city – with some background about what MSEs are and how they relate to privatisation. This chapter focuses more on the process: that is, how you proceed from the decision to action.

## 3.2 Understanding the different types of micro and small enterprises in your city

### 3.2.1 MSEs: working for, with and parallel to local government

When we discuss an MSE-based strategy for privatisation and modernisation, we are talking about several kinds of activities. In some of these, the MSE will be actually working for the local authority or for its citizens, businesses and taxpayers, providing its citizens with a service they need and value and that contributes to the overall health, cleanliness and well-being of the city. In this document, we use the term **services-based** to describe this relationship.

In other instances, the MSEs will be working **with** or **alongside** the city's urban cleansing activities. These salvage and recycling MSEs are pursuing a livelihood in materials recovery, which helps the city achieve its waste management goals but may not directly be under the city's supervision. We call these MSEs **commodities-based**, since they are focused on extracting and marketing the commodities value of the materials themselves.

A third kind of MSE or CBO exists for idealistic, religious, environmental or social purposes which may be **parallel to** the urban waste system (for example, in the case of environmental protection goals) or be entirely independent of it, but which advances its purposes by interacting with the urban waste system on different levels. We call these **values-based** MSEs and CBOs. Table 2 classifies the micro and small enterprises studied in Latin America using this typology.

Type of MSE/Cooperative	Cases or Cities per Country	Classification
Groups of small entrepreneurs offering (collection) services directly to the population with municipal approval.	Guatemala City, Guatemala Alajuela, Costa Rica San Salvador, El Salvador Cochabamba, Bolivia	Services-based MSEs
Informal sector waste pickers who have been organised to protect their livelihoods.	The Canoas Association of Waste Pickers, Brazil The Coopamare Cooperative, Brazil The National Association of Recyclers (ANR), Colombia Recuperar Cooperative, Colombia	Commodities-based MSEs
Collection enterprises backed by the community	Some cases in Costa Rica Some micro enterprises in Lima, Peru	Services-based, with possible values-based aspect
Collection organisations created by the community	Sao Francisco Community Centre, Brazil Some cases in Costa Rica	Values-based, performing a service function
MSE/Coops sponsored by international development aid organisations	Micro enterprises in Lima, Cajamarca, Ilo and Piura, Peru El Alto, Bolivia Pre-cooperatives in Cucuta, Colombia Alameda Norte, Guatemala	Values-based (may have either a service or commodities accent)
MSE/Coops created with the support of the municipal government	La Paz, Bolivia	Services-based

**Table 2. Latin American MSEs classified as Services-, Commodities- or Values-based**

Source: Arroyo, Rivas and Lardinois, 1999

We discuss these three basic kinds of MSEs in greater detail in Chapter 4.

### 3.3 Recognising and analysing existing MSE activities in your jurisdiction

Because of their informal or semi-formal character, micro and small enterprises are not always evident or easy to find. This section gives you some advice on how to find the MSE waste sector in your city and what to do when you find them.

### 3.4 MSEs in cities in the South: the experiences of the UWEP programme

The Urban Waste Expertise Programme was developed by WASTE, in the Netherlands, as a programme for support to small-scale innovations in urban waste management in the South. The programme has focused on producing information on solid waste initiatives taken by communities and the MSE sector, and which test and operationalise small-scale solutions in poor and marginal communities.

From 1995 to 1997 the UWEP programme focused on gathering information and supporting 'South-South technology transfer'. A number of publications came out of this period of research and documentation, and some of them have been used in this document.

#### 3.4.1 Finding and contacting micro and small enterprises in your city

The experiences with MSEs in the UWEP programme suggest that there are MSEs working on waste and recycling in almost every city in the South (and most other cities), and that documenting and analysing the activities of this sector is the key to understanding the structure of the informal waste management system in your city.

Because micro and small enterprises by definition are small and are also usually informal (unregistered, do not pay taxes, do not have permits), finding them requires fieldwork – someone spending two weeks to two months (or more, if your city is large) actually looking for these enterprises, speaking with their owners, observing their operations, cross-checking the information and

documenting it. This person should NOT be any kind of inspector or policing agent – the message is that you want to know what they are doing, not to force them to comply with anything. In many cases the local mosque or church will know who some of the lowest people in the chain are. They may be living on or close to the street and the religious institution may be working with them for charitable reasons.

### **Picking the field worker**

If you already know that the informal waste sector is a special ethnic or social group (for example Coptic Christian Zabbaleen recyclers in Egypt, Roma ('gypsies') in all of Eastern Europe, untouchables in India, Italians or Jews in most of the North; immigrants, drug addicts or other at risk populations in Central America) you may want to have your field work done by someone from that ethnic or social group. They will be more likely to gain the confidence of the entrepreneurs and workers.

### **Locating the enterprises**

To find micro and small enterprises, the easiest place to start is at the dump or landfill. There you can find four or more basic kinds of information that will lead you further:

- You will find out what materials are extracted for recycling, by talking to the waste pickers and by observation.
- You can find out by asking the waste pickers, to whom and where they are selling these materials (but not usually in what quantities or at what prices as that is considered to be sensitive information for competitive reasons).
- You can find out by observing the vehicles dumping at the landfill which businesses are picking up the waste. By talking to the drivers, you can likely find out where to find the owners.
- You can also find out by talking to the drivers who their competitors are and where to find them.

Once you have this 'entry point' information, you can and should visit the businesses – or call them if they have phone numbers, which many will not. For the recycling businesses, it is a good idea to actually take with you some recyclable materials to sell. This will first of all give you a lot of information about the transaction. Secondly, it will put the person you speak to more at ease.

After the person realises you are not going to hurt them, you can gradually explain your mission and ask for information about where the materials go from there. Materials businesses are organised more or less in a chain, with the first link being the waste picker or itinerant waste buyer; the waste picker or itinerant waste buyer sells to a junk shop; the junk shop sells to an intermediate (sometimes called a 'middle dealer' or a larger junk shop); the intermediate sells to a factory, a larger intermediate or an exporter; and finally the last link is to an end-use industry.

For the waste collection businesses, again, a good way to start is to ask whether they are willing to collect from your own home, and to ask a few of your colleagues living in other districts to do the same. In most cities the informal collection sector has some kind of division by area. Although these businesses are sometimes extremely competitive, they will usually tell you how to find the businesses that serve your area.

### **A brief note on secrecy and competitiveness**

These businesses are very competitive and certain kinds of information are considered proprietary or trade secrets. Price for materials and quantity handled by the enterprise are two particularly sensitive pieces of information. One reason to go with some actual materials to sell, or to call about an actual address for collection is that this will tell you immediately about prices without your having to ask.

## **3.5 Formalising and extending autonomous MSE and CBO models: the four UWEP pilot project settings**

For four years, from 1996 to 1999, the UWEP programme and its partners in the South, using local researchers, focused on getting, analysing and documenting this kind of information in Latin America, Asia, the Pacific and Africa. The results have been used to create four zones of intensive intervention, called 'Pilot Project Settings', which have attempted to move from recognising and documenting the activities and contributions of MSEs and CBOs, to acknowledging and legitimising their activities, to finally integrating their activities into an urban waste planning and development process.

The programmatic approach to these pilot projects varies considerably, but includes several common elements:

- Supporting and promoting community involvement through the facilitation of stakeholder platforms, with the community as an active partner in the development process.

- Analysis, documentation and legitimisation of informal MSE sector initiatives in waste management; active promotion of their recognition by the local authority; and longer-term work with the local authority to integrate the MSEs and their activities into the long-term vision of urban waste management.
- Stimulating the creation of – and support to existing – organisations above the MSE level which strengthen the position and negotiating power of the MSE sector: examples include marketing cooperatives, business associations and MSE groupings.
- Technical and strategic support to MSE and CBO recycling and composting initiatives.

In the region of Batangas Bay, in the Philippines, the activities included support to building a stakeholder platform in Bauan City; two integrated development initiatives incorporating MSE service providers into a formal waste system, one in San Miguel and one on the island of Tingloy, and support to the MSE recycling sector in developing a marketing cooperative and expanding into the non-traditional material paper. Not all experiments succeed, but in this case the Tingloy process appears to be sustainable and the Bauan City marketing cooperative is having some success.

In the Mali, West Africa pilot projects the local partner has been working intensively on community-based waste management in Commune 4 of the City of Bamako. An early focus on recognising, legitimising and strengthening the MSE waste collection sector is gradually expanding to a dialogue not only with the mayor of that commune, but with other communes and the central city administration on the future of waste management in Bamako.

The Bangalore pilot projects in India provide a launching point for local citizens to influence the development of waste services to their community and to provide their experiences as examples in the movement to lobby for national legislation. The practical side focuses on the services- and values-based activity of community composting, implemented by the local branch of CEE, a national environmental para-statal organisation.

In La Ceiba, Honduras, where a comprehensive programme to provide waste service coverage to the whole city was originally planned but never implemented (in part due to the effects of Hurricane Mitch), the activities have slowly reassembled themselves into a project to support and strengthen the existing MSE collection sector in its negotiations for routes, rates and a commitment to the future with the mayor's office.

### **3.6 Checklist: is the MSE approach right for you?**

The following checklist will help you decide whether an MSE-based privatisation strategy is worth considering in your city. Answer each question with Yes or No. If the answer matches the one in the last column, micro and small enterprises are a good choice and MSE privatisation may be a good solution to your problems.

Question	Yes	No	Choose MSEs if the answer you gave is:
Is there formal waste collection and street sweeping in some parts of your city?			No
Is there formal waste collection and street sweeping in ALL parts of your city?			No
Is coverage for these services less than 100%?			Yes
Are marginal and informal settlements and districts a problem?			Yes
Do waste generators pay directly for waste services?			Yes
Is the payment rate currently less than 100%?			Yes
Are you under pressure to improve services to poor areas?			Yes
Are you satisfied with the current level of community participation and involvement in urban waste services?			No
Do the communities and neighbourhoods seem to be satisfied with the level and reliability of the urban waste services they receive?			No
Are most of your waste workers and street sweepers from one single disadvantaged minority ethnic, religious or social group?			Yes
Is recycling on your policy and planning agenda?			Yes
Does your city have street waste pickers?			Yes
Are informal waste pickers working at the dump that serves your city?			Yes
Are you under pressure to shrink public sector employment?			Yes
Are you under pressure to improve environmental performance?			Yes
Are you under pressure to improve cost effectiveness and reduce costs of municipal services?			Yes
Do you have local fee assessment and taxation authority?			Yes or No
Do you have contracting authority for small services?			Yes
Can you write a contract for two to five years?			Yes

**Table 3. Checklist for working with MSEs**



## Chapter 4. Understanding the Three Different Types of Micro and Small Enterprises

We tend to treat all micro and small enterprises (and community based organisations and individuals) involved in waste services as more or less the same type of entity. As we look closer, though, we begin to understand that the world of micro and small enterprises consists of three fundamentally different types of enterprises, services-based, commodities-based and values-based MSEs. Although there are some common features, we are finding that these three types operate differently, have quite different characteristics and require different types of interventions to support or promote their activities. Also, the three types differ significantly in their role in creating work, whether by 'work' we mean jobs, livelihood and family businesses, or subsistence activities.

The three types of MSEs can be defined as follows:

1. Services-based MSEs: enterprises that get their income from performing a service; paid by clients, beneficiaries or a combination of these. Examples: waste collection, street sweeping, industrial cleaning.
2. Commodities-based MSEs: enterprises that get their income by selling at a profit materials or products which they have salvaged, produced or bought.
3. Values-based MSEs: entities or enterprises that serve a social, religious, environmental or cultural purpose, whose primary goal is some form of social or cultural change or strengthening or environmental protection, and who see involvement in urban waste management as either an economic activity to support their promotion of values, or as a means to raise awareness and consciousness in their chosen areas of focus.

Because these are essential to understanding the role of MSEs in the labour market, the following distinctions are made:



*Photo 4. Family labour in Moqattam, Egypt.*

*Photo: ©WASTE, Mounir Bushra*



## 4.1 Common features of urban waste MSEs

Services-based, commodities-based and values-based MSEs are distinctive along many dimensions. We will explore those differences in this section. But they also share many features:

- MSEs in general are livelihood businesses, with owners/operators the same as or close to workers; with the emphasis on providing a base salary that the owners and the workers can live on.
- MSEs are characterised by a heavy reliance on family labour, community labour, volunteer labour or other forms of unpaid assistance.
- Family, personal and community networks subsidise MSE operations in hidden or implicit ways; if these subsidies are removed, the businesses can fail.
- The owners and managers of the MSEs usually have a poor ability to analyse their own cost factors and performance, in part due to the entanglement of personal, social and economic functions.
- Many MSEs have a personal relationship with their clients or suppliers.

### 4.1.1 Distinctive features of commodities-based MSEs

In this section we look at the distinctive features of commodities-based MSEs, that is, those aspects that distinguish the three types from each other.

#### 4.1.2 Basic definition

Commodities-based Micro and Small Enterprises are businesses earning their income by selling at a profit materials or products which they have salvaged, produced or bought from someone else.

#### 4.1.3 Business profile

Commodities-based MSEs are generally in the recycling business. They buy and sell (or salvage and sell) products and materials; some of them also do hand- or mechanical manufacturing to add value to the materials and increase their sale price. The usual unit of payment is by weight, volume or item: kilos of paper, cubic metres of compost; a particular kind of bottle; a used but not worn out tyre. Examples of commodities-based MSEs include: landfill pickers, itinerant waste buyers, recyclers, junk shops, tyre retreaders, small-scale manufacturers and compost businesses.

Other types of commodities-based businesses can be found in the business of repair, small manufacturing and remanufacturing or rebuilding.

#### 4.1.4 Financial characteristics of commodities-based MSEs

- The prices that a commodities-based MSE can earn are variable and set by the global commodities marketplace. The global prices which an intermediate processor can get for a particular material are close to global prices, but as the scale of operations and volume traded goes down, the prices get lower and lower. The smallest businesses get low prices because the materials are not well-sorted and because the quantities are high. The junk shops also lower the prices to itinerant waste buyers and waste pickers to compensate for the fact that the junk shops provide equipment, credit and storage. These businesses operate in a highly speculative marketplace, and rely on spot buying and immediate transactions.
- These businesses have a potential both for heavy losses and high profits. For those with a talent for trading, a commodities-based MSE may be one of the quickest routes out of poverty and into the commercial class of the society.

Small-scale manufacturing and repair businesses are somewhat better insulated against global marketing trends, since they sell into niche markets.

#### 4.1.5 Political and social characteristics

- Commodities-based MSEs are relatively less dependent on local circumstances and the local political environment, and relatively more dependent on the global commodities marketplace. For this reason they have the potential to be less vulnerable to local political manoeuvring.
- The commodities trade – even at a relatively small scale – has the potential to transform entrepreneurs to middle class or even to wealthy classes.

##### **Risk profile**

- Commodities-based MSEs are very risky in both directions: they have a high upside potential for profit (and movement out of poverty), as well as a serious downside risk.

- They have both a high potential to profit from modernisation schemes and a high risk of being destroyed by them. This situation was presented to a group of Canadian recycling businesses in 1988 as: “The bus is leaving, get on it or get under it.” (Stephenson, personal communication, 1990)

#### 4.1.6 Labour creation characteristics of commodities-based MSEs

- Commodities-based MSEs provide work for the owners, some family members, and also provide ‘spin-off’ work to smaller collectors, end-users and manufacturers. In addition, they also provide frequent piece-work payments for large numbers of related businesses, or for occasional collectors who collect when their other seasonal work dries up.
- The economy of scale is variable, from very small to much larger than the MSE classification would include. Also the throughput (amount of materials handled) does not have a predictable relationship to the physical size of the facility, nor to the number of employees.
- Workers usually see work as transitional and get out of it as quickly as possible, but **owners and their families** may stay in it for a much longer period, building large, even multi-million dollar enterprises from very small beginnings. In this sense the work itself may promote mobility or access to more education or services.

## 4.2 Features of services-based MSEs

### 4.2.1 Basic definition of services-based MSEs

Services-based MSEs are micro and small enterprises that get their income from performing a service, paid by clients, beneficiaries or a combination. These are businesses that get paid for DOING something: cleaning, renovating, but in most cases also removing waste.

The usual unit of payment is: by the hour, day, month; by the district or street; by the quantity of waste. Examples of services-based MSE activities include waste collection; park maintenance; street sweeping; industrial or commercial cleaning; latrine emptying.

### 4.2.2 Financial characteristics

- Prices for services are quite often externally determined with little room for negotiation. Businesses may begin informally or formally, but in many cases they come to rely on contracts with formal sector entities – formal private or public sector – whose tolerance for pricing is politically limited.
- There are extremely low profit margins, which depend on a great many costs not being included in the calculation. Delays in payment (characteristic of municipal governments as clients) tend to eat up any margins that may be there in theory.

### 4.2.3 Political and social characteristics of services-based MSEs

- Because they depend on contracts with the municipal authorities, services-based MSEs are vulnerable to political, administrative and legal changes. These organisations have relatively little ability to mobilise political power and to insert themselves into the formal planning process, so they are exceptionally vulnerable to political changes and/or to donor-funded initiatives that provide compactor trucks to the city. For this reason, sustainability may depend on their forming associations and/or joining formal groups like the Chamber of Commerce. In Costa Rica, this strategy has resulted in the formation of several haulers' associations modelled on a first one in Alajuela, which support their members and lobby for better contracting conditions.
- In many countries contracting laws do not permit mayors and other municipal officials to contract beyond their term of office, so the contract terms may be relatively short for political reasons.
- There is potential for a good personal relationship with clients in the community and informal feedback systems are likely to work well.

### 4.2.4 Risk profile

- Services-based MSEs are dependent on local circumstances, especially politics. They have a serious risk of poor cash flow due to late payment from municipalities or clients, or from low payment rates from direct clients.
- They have very limited ability to survive conventional modernisation programmes, or to compete with large formal private-sector companies, particularly when these are supported by donor funds.

### 4.2.5 Labour creation characteristics of services-based MSEs

- Services-based MSEs provide work for the owners and some family members, and in some cases (like the enterprises in Bamako) for outside paid collectors or sweepers, but they do not usually provide formal wage employment for large numbers of employees.

- Their economy of scale is small, but important. If they are not achieving economy of scale, they can fail for financial reasons.
- The social status of the businesses, their owners and their workers is low. The image of the work is very negative. Because of this the workers (different from owners) frequently see work as transitional and get out of it as quickly as possible. One exception may be women, who see it as steady work in a labour market where their options are more limited than those of men, and for whom the turnover tends to be lower (Scheinberg, Muller and Tasheva, 1999).

### 4.3 Features of values-based MSEs

#### 4.3.1 Basic definition values-based MSEs

Values-based micro and small enterprises and community-based organisations are entities or enterprises that serve a social, religious, environmental or cultural purpose, and whose primary goal is some form of social or cultural change or strengthening, or environmental protection. They see involvement in urban waste management as either an economic activity to support their promotion of values, or as a means to raise awareness and consciousness in their chosen areas of focus.



*Photo 5: Values-based MSE, Peru - Lima.*

*Photo: ©WASTE, IPES*

#### 4.3.2 Financial characteristics

- Values-based MSEs usually start with a subsidy from outside for start-up, which covers equipment but not operations.
- The price and fee-setting can be arbitrary and unrelated to the real costs in the beginning, when the need for full-cost recovery is secondary to social goals. But it can prove fatal over the longer term, when the external support for the social goals disappears. COFESFA, a women's waste cooperative in Bamako, receives funds and grants for community cleaning. They charge an established price for sweeping 1 lineal metre of street but this price has no relationship to their costs of hiring sweepers and providing equipment.
- The income stream from the urban waste activity, even when it is related to costs of the service, usually only covers operating costs. The values-based MSE is likely to rely on grants or subsidies in order to cover replacement and/or depreciation of equipment.

- Most of these projects make no profit by design – any income goes to support social goals, and the advancement of these goals is considered the success – not the sustainability of the operation. This is the case with the composting operation in Nairobi, which is supported by the local community Catholic church as a means to get the Chokora – the dump pickers – off the dump and to give them some work experience. The resulting compost is marketed, but there is not any requirement for financial sustainability. The real goal is to keep the pickers employed until they learn about working in a structured environment and then to move them into regular jobs.

#### **4.3.3 Political and social characteristics**

- By definition values-based MSEs are highly idealistic – their local and national political power and influence depends on whether they are with or against the ideas of the elites or political parties in power at any one time. For example, the APE, an organisation in Cairo which supports the Zabbaleen (Coptic Christian) informal waste sector, goes through cycles of activity: when its leadership has a lot of political influence, its programmes are well-supported and it is able to do many things; when the political fashions change, it retrenches to its most basic activities.

#### **4.3.4 Risk profile**

- Values-based MSEs and CBOs have a limited and highly variable ability to survive conventional modernisation programmes, first because they are seen as transitional; secondly because they are not usually integrated at all into the municipal institutions for urban cleansing and in some cases may be in conflict with these institutions; and thirdly, because the typical involvement of upper- or middle-class women in these initiatives gives them the reputation of being frivolous, charitable and as a result not 'serious'.
- These entities are usually not too risky in the short term, since programmes are based on 1- or 2-year budgets and funding is assured for that period – particularly at the beginning when energy and idealism are at their heights. They are extremely financially risky in the long term, as they are dependent on outside funding, not on their own efforts. In fact, in many cases operational and financial success dooms these organisations, as their donors decide they no longer need support. This creates a strong counter-incentive for strict financial accountability.

#### **4.3.5 Labour creation characteristics**

- Values-based MSEs often provide work for special social groups, which are priority beneficiaries for the founding entities: youth, women, mentally and physically disabled persons, immigrants, street people and dump pickers. The 'kringloop bedrijven' (recycling businesses) in the Netherlands are a clear example of this: they employ mentally handicapped people and teach them skills related to repairing the reusable furniture.
- Values-based MSEs are more likely to provide stipended or part-time positions than full-time jobs – the payment is often either symbolic or unrelated to the amount of work done. The work is often designed to be transitional and to equip the workers to do other things – and to move on as soon as they are able to do so.
- The economy of scale is generally small and the models are not replicable, or are only transferable to an extremely limited extent.



## Chapter 5. The La Ceiba Study: Case Study in Integrated Planning for MSE Privatisation

In 1996, the UWEP programme, working jointly with the municipality of La Ceiba in Honduras, the World Bank, the Peruvian NGO IPES (Instituto para la Promoción de la Economía Social), the Honduran national government and some donors, supported the production of a plan to implement comprehensive MSE-based privatisation in La Ceiba. External factors including Hurricane Mitch ultimately prevented the plan from being implemented as envisioned, but the initiative nevertheless serves as one of the few examples of an integrated planning strategy that is built around the idea of MSE-based privatisation. For this reason, we will present it here as an example.

### 5.1 The situation in La Ceiba in 1996

When the study was commissioned in 1996, La Ceiba had a slightly higher level of urban cleansing than most Honduran municipalities, but the effectiveness and efficiency was judged to be low and the costs were below the Central American average. At that time 10 street sweepers swept the centre – limited to the paved roads, covering an average of 1.17 lineal km per day. Also in 1996 there were about 10 landscaping workers in charge of maintaining 6.30 hectares of parks, boulevards and green spaces, including paths and tiled areas inside the parks. According to a study, only about 19% could be judged to be reasonably maintained.

The Municipality of La Ceiba in 1996 arranged collection of around 30 tons per day of waste through personal contracts with a group of around 18 one- and two-truck MSEs. This achieved a coverage rate of approximately 45% and was the only waste collection available for these areas. Unlike many cities, however, the micro and small enterprises were paid directly by the municipality and not by the clients themselves. And the 45% coverage did not include most of the poorer neighbourhoods of the City. An additional 5% of the population in high-income areas contracted private collectors for their own collection, usually via community development organisations. The collected waste was taken to an open dump located at the periphery of the city in a neighbourhood called Los Laureles, where burning was frequent.

The initial study looked not only at what was being done by the municipality and the MSEs, but at what was not being done or done adequately – including street sweeping outside of the central district, placement and maintenance of public toilets, effective park and green space maintenance, beach clean-up and the like.

The result of this comprehensive needs analysis was a plan to set up about 30 micro and small enterprises in urban cleansing, which would work with low-technology (such as tricycles), plus to strengthen the ones that were already there.

Function	MSEs	Workers per MSE	Total workers	Coverage	Cost per month
Street sweeping, beach cleaning, public toilet maintenance	2	9	18	11 km of streets, 18 litter baskets, half of the beaches, one set of public toilets	US\$ 2,558
Waste collection and transport	6	3	18	2025 households, about 6 tons per day	US\$ 3,211
Cleaning, collection and transport using tricycles in marginal areas	4	12	48	3,994 households, 8.5 tons per day	US\$ 3,938
Management of green areas	1	14	14	10 hectares green areas	US\$ 3,916
Recycling	6	n/a			
Total MSEs	19		98		

**Table 4. Planned MSE creation project in La Ceiba**

The proposal was to involve a single organisation – IPES – in setting up the new micro and small enterprises and integrating the old ones into the new structure. The City agreed to contract the micro and small enterprises for the services. The investment costs were to be provided by a combination of the World Bank and the Honduran government. For reasons unrelated to the design, this plan came apart in 1998 and was not implemented in its proposed form.

### Project organisation

Figure 2 shows the organisation as it was planned for La Ceiba.

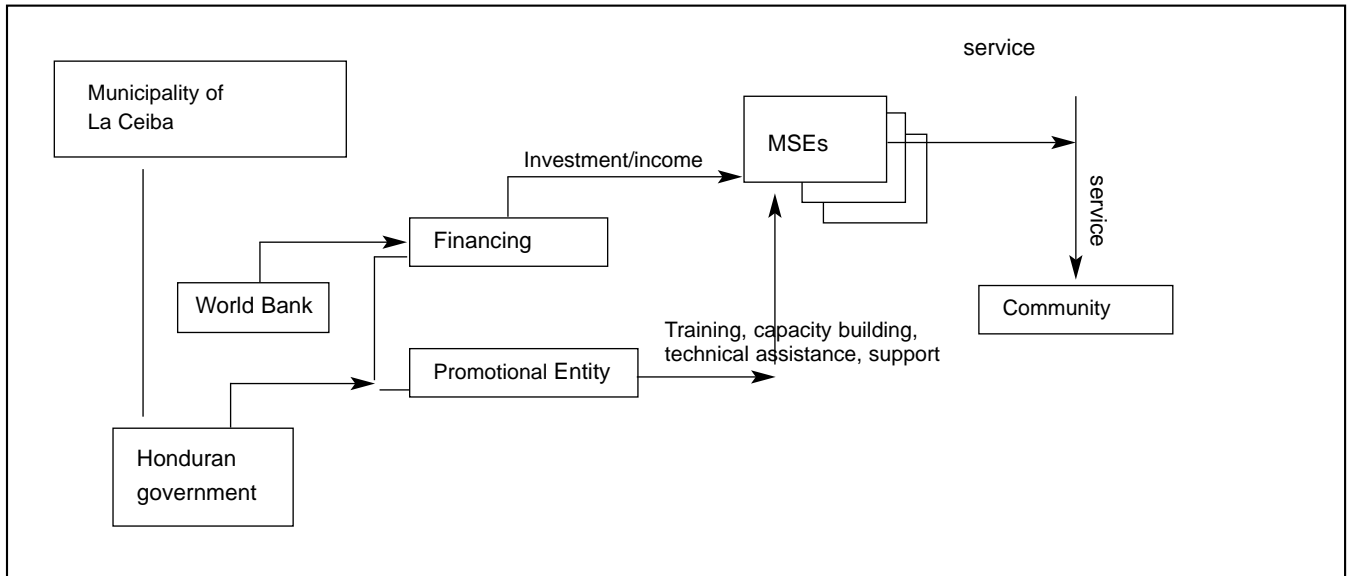


Figure 2. Proposed project organisation in La Ceiba, Honduras.

### 5.2 Benefits to the city

The benefits to La Ceiba were clear. First, there would be a substantial improvement in the quality of the services, as well as in the quantity of service offered (as measured in coverage). The increase in quality would have affected the centre and the middle- to high-income areas, and would have occurred as a result of increased efficiency and a general technical overhaul of all the services. The increase in quantity was planned for the marginal and informal settlements, which at that time had no coverage at all.

Secondly, there would be a sustainable, urban cleansing infrastructure with modest capital investment. The matching of technical sophistication to the needs of the communities was designed to keep the costs low.

Waste collection and cleaning of streets and public spaces by MSEs would be financed by the municipality, through fee collection from residents. Recycling would be promoted through MSEs that would earn their fees by selling materials. According to a recycling study, four out of six recycling businesses were predicted to have positive cash flow, meaning that as a group of businesses, the complex would be viable.

### 5.3 Actual developments

In fact, the comprehensive approach proposed for the La Ceiba Pilot Project Setting was never implemented in its entirety, because of a combination of circumstances too complex to discuss here. However, the vision of an integrated MSE-based approach to urban waste systems has persisted in La Ceiba. Specifically, the MSE private waste collectors have been consistently supported by the mayor who took office in 1998 and who immediately raised their fees. They are now being supported to develop their own organisation, and to re-design the routes to make the distribution of work more equitable. There is also an initiative to lengthen the contract terms from six months to two to four years, in order to allow the MSEs to amortise vehicles over the contract term.

## Chapter 6. Summary and Conclusion

### 6.1 ISWM analysis comparing conventional versus MSE privatisation approaches to waste collection

In this section we use the analytic framework of ISWM in order to compare MSE privatisation to conventional (international, investor driven, large-scale) privatisation. We use the waste element **waste collection** as the focus for this comparison.

ISWM Aspect	Dimension or factor	Advantages	Disadvantages
<b>Policy and legal aspect</b>	Tendering: may require a change in tendering procedures to allow for smaller districts and/or consortia	Introduces and maintains competition	Is a more complex legal construction
	Monitoring: works well with community supervision	Strong client-provider relationship	More complex task for the local authority
<b>Institutional aspect</b>	Management: MSEs are local, so management can proceed using only local institutions.	Local relations can mean better accountability and control; disputes do not become international incidents.	There are many points of management, not just one.
	MSEs are small and vulnerable.	It is easier to work with them and control them over the long term.	There is always a danger of failing; also they may not dare to signal problems.
<b>Social and cultural aspect</b>	Supports the existing service and commodities sectors.	The MSEs and other actors are already well known and know the culture and social aspects.	They may be conservative and unwilling to introduce change.
	Approaches to collection will be culturally appropriate.	Avoids pressure to upgrade to inappropriate and expensive vehicles.	Innovation and social change may also be difficult to stimulate.
	MSEs know the community and are part of it.	They have close relationships to the community they serve.	They may be subject to local partisanship and local alliances.
<b>Economic and financial aspect</b>	Investments are local.	The money for the service stays in the community, where it improves the local economy.	The access to large outside sums of money is reduced.
	MSEs are livelihood businesses.	The price of collection does not need to incorporate very much return on investment.	There are difficulties to mobilise capital for investment.
	Economy of scale and technical approach fit the community.	The costs are low and paid in local currency.	None
	Level of service can be designed to fit local needs.	Willingness to pay and payment rates are higher when people agree with the approach.	May be conflicts between desired service levels and hygienic considerations.
	High labour to capital ratio	Employs more people for the same money – spreads income in the community.	The work is dirty and has low social status.
	High reliance on animal traction and manual loading	Systems do not rely much on fossil fuels and are therefore resistant to global changes in the price of fuel.	The work is hard and may cause physical problems or damage in workers and their draught animals.



<b>ISWM Aspect</b>	<b>Dimension or factor</b>	<b>Advantages</b>	<b>Disadvantages</b>
<b>Environmental aspect</b>	Energy use remains low.	Avoids excessive use of non-renewable resources.	Short hauling potential limits ability to remove waste to safe disposal.
	Focus on primary collection and removal requires support.	Improves streets and community.	Risks development of a lot of uncontrolled secondary collection sites which become illegal dumps.
<b>Technical and performance aspect</b>	MSEs use smaller scale appropriate technology.	It is possible to serve all areas, even poor ones.	Not all clients can pay for the service, so the MSE may not cover its costs.
	MSEs know the community and routes.	Local feedback is immediate and effective.	Local rivalries may introduce problems.

*Table 5. ISWM analysis of MSE privatisation of collection compared to conventional privatisation*

## **6.2 Is MSE-based privatisation sustainable?**

Based on this ISWM analysis, it can be seen that MSE-based privatisation has strong advantages on the service and price side. Many of the disadvantages relate to the municipal authorities' transaction costs – since dealing with multiple private actors is more complex than dealing with only one.

However the conclusion appears fairly clear: MSE-based privatisation is a better alternative, with more likelihood of success.

# References and Sources of Further Information

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Scheinberg, A., M. Muller and E. Tasheva. (1999). *Gender and Waste - Integrating gender into community waste management: project management insights and tips from an e-mail conference, 9-13 May 1998*. UWEP Working Document 12. Gouda, the Netherlands: WASTE. (Also available in French.)

Various case-study documents were published during the Urban Waste Expertise Programme by WASTE on micro and small enterprises in waste management in Costa Rica, Peru, Guatemala, Bolivia, Colombia and El Salvador.

## Websites

The non-governmental organisation **CEMPRE** in Brazil runs a frequently updated website in English and Portuguese on solid waste management with a strong focus on recycling.

Address: [www.cempre.org.br](http://www.cempre.org.br)

Sources of information for small businesses on finance, **entrepreneurship**, enterprise development and economic aspects can be found on the website with the following address:

[www.enterweb.org](http://www.enterweb.org)

USAID runs a virtual database of **Best Practices in microenterprise** on the web where many publications can be downloaded. The address is:

[www.mip.org/pubs](http://www.mip.org/pubs)

**Web-Resol** runs a website with general information on solid waste management in Spanish, Portuguese and English. It is specifically aimed at Latin America and the Caribbean. The address is:

[www.resol.com.br](http://www.resol.com.br)

The **Si-Promicro initiative** coordinates a frequently-updated website in Spanish with information for micro and small enterprises.

The address is:

[www.sipromicro.com](http://www.sipromicro.com)

Another important source of information is the UNDP site that covers **Public-Private Partnerships for the Urban Environment**.

The website address is:

[www.undp.org/ppue](http://www.undp.org/ppue)

The **WASTE** website, [www.waste.nl](http://www.waste.nl), offers a wide array of downloadable documents on waste and related issues.







*Micro- and Small Enterprises in Integrated Sustainable Waste Management* focuses on the various roles micro- and small enterprises can play in urban waste management. It pays specific attention to the ways in which these stakeholders contribute to the sustainability of their city's waste management system.

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