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Small enterprise opportunities in municipal solid waste management

John P. Grierson and Ato Brown

Waste is a resource in the wrong place at the wrong time. Mustapha Tolba, former UNEP Executive Director

Servicing growing cities

Rapid urbanisation is a dramatic reality in most developing countries. Small towns are becoming cities and big cities are getting bigger as growing and increasingly mobile populations crowd into urban areas. Expanding urban populations, with their ever greater needs and expectations, are fuelling a relentless growth in demand for more and better urban services; services that many municipalities cannot hope to provide in the

current climate of stagnant municipal budgets and decreasing external support. The staff, equipment, and budgets—and more importantly, the systems and methodologies—needed to service growing cities are simply not available within the public sector (UMP/SDC/SKAT 1996a). One of the most obvious manifestations of this reality is that small enterprises are moving in to fill the vacuum left by the contracting public sector capacity. These early and imperfect, yet innovative and successful, private sector initiatives have often prevented problems from becoming crises. But, more importantly, they have demonstrated that private sector enterprises have an important role to play in meeting the demand for municipal services.

It is now broadly recognised that 'public-private partnerships'—that is, municipal authorities working together with private enterprises to fulfil public sector responsibilities for urban municipal services—can help meet the growing demand for these services. Waste collection and processing is but one area where there is clear evidence both of the benefits of private sector participation and of the need for closer cooperation between municipal authorities and private entrepreneurs (Bartone 1995). This report looks at the progress to date of the component of an action-research initiative led by the Collaborative Group on Municipal Solid Waste Management in Low-income Countries that is developing best practice guidelines for expanding the involvement of micro- and small enterprises (MSE) in municipal solid waste management (MSWM).

The Collaborative Group on MSWM in Low-income Countries

This group is an informal international network encompassing multilateral agencies, including the UNCHS (Habitat), the World Bank, and the UNDP (working together as the Urban Management Programme), and WHO; bilateral agencies, including the Swiss Agency for Development and Cooperation (SDC) and Deutsche Gesellschaft für

Technische Zusammenarbeit GmbH (GTZ); and a number of foundations, NGOs, research groups and institutions, and professional specialists in the field of MSWM. Its first meeting was held in April 1995 in Switzerland (UMP/SDC/SKAT 1995) followed by a workshop held in Cairo in October 1996. The theme of this workshop was 'expanding enterprise involvement in MSWM', and participants were charged with the task of developing practical guidelines to support effective public-private partnerships.

Expanding enterprise involvement in MSWM

Public-private partnerships are a relatively new and innovative approach to municipal service provision, particularly in Africa. Documented experience is modest; relatively little is known about how the public and private sectors can work together effectively, or about how public-private partnerships will affect the evolution of public sector responsibilities. A very large part of the current private sector involvement in municipal services is the result of the private sector simply moving in to grasp the opportunities created by growing demand, a phenomenon readily apparent in the field of waste management. MSWM responsibilities are increasingly being abandoned to market forces, with informal, irregular, and even illegal enterprises often in the lead in taking advantage of these opportunities. This dramatic and imperfect process has served to demonstrate both the potential of the private sector to supply MSWM services and the need to co-opt and focus this potential through a greater degree of 'partnership' between the public and private sectors (Schübeler et al. 1996). There is an emerging realisation that there is at hand the opportunity to move beyond merely allowing the private sector to 'rush in', towards working with the private sector in order to expand overall capacity to 'reach out'.

The private sector has the capacity to

raise capital, to mobilise latent material and personnel resources, and to apply these quickly and efficiently to the market for MSWM services. The public sector has the opportunity—indeed, many argue, the responsibility—to attract and co-opt these capacities while continuing to provide the strategic direction, the policy framework, and the context of societal values that must stimulate and shape the growing market for MSWM services.

The nature of the need is clear and visible. Cities, municipalities, neighbourhoods, and squatter areas are being overwhelmed with waste. As Mustapha Tolba has succinctly implied: many of those who are idle or under-employed amid this waste could be productively employed in collecting, sorting, transporting, and processing it. The eyesore of ill-managed urban waste is but the tip of a well-understood environmental iceberg: efficient and sustainable natural resource use and acceptable standards of public health are threatened by inadequate and inefficient municipal waste management.

The nature of the partnerships needed to address such problems and capture the attendant opportunities is much less clear. What, indeed, is a 'public sector-private sector partnership'? What are its characteristics and practical realities? What effect will these new relationships have on existing responsibilities? The urban management initiative reported on here, and the practical experiments of many municipalities worldwide, are seeking to clarify and document the answers to these difficult questions. While expert knowledge is admittedly still modest, there is a broad-based recognition of the need to determine best practice. A firm base has been established; statements of basic principles and useful practical guidelines are beginning to emerge in support of efforts to evolve effective 'partnerships'.

Public-private partnerships

Consensus and clarity should not, however,

be taken for granted. Misunderstandings persist. One area of uncertainty is the effect on public sector responsibilities. It can be stated unequivocally that public-private partnerships are *not* about the abdication of public sector municipal responsibilities. Public sector responsibility cannot be abandoned or delegated. Because of the embedded social, environmental, and public health aspects, urban municipal services will remain the responsibility of the public sector. A growing array of 'means' are needed to reach an expanding array of 'ends'. Public-private partnerships are one of the means municipalities can use to expand their capacity to meet their expanding public sector responsibilities.

Three defining characteristics of public-private partnerships have emerged:

- 1 *synergy* (private sector capital, capacity and efficiency)
- 2 *combined with* public sector policy and administrative oversight in order to meet the
- 3 *public sector responsibility* to provide efficient, equitable, environmentally sound municipal waste management services.¹

Large and growing need, set within a wider context that emphasises economic adjustment and transition and greater environmental awareness, has resulted in a high degree of acceptance of the principle of public-private partnerships. This acceptance is not, however, matched by a similar degree of understanding of how and when to bring such partnerships to bear on MSWM issues. A much better understanding is needed of the institutional, financial, and environmental issues affecting private sector involvement in MSWM, and of the practical aspects of structuring and administering effective partnerships. There is a clear need to develop and make widely available the practical 'tools' that will be needed to build effective partnership arrangements at the local level (UMP/SDC/SKAT 1996b).

Putting partnerships into practice

The types of enterprises that are likely to participate in MSWM partnerships are for the most part well known and readily available. In general these will be businesses with common capacities and flexible resources that can be applied to waste collection, sorting, consolidation, transportation, recycling, processing, and re-use. Many of the new business opportunities that are emerging, particularly at the primary collection and sorting stages, offer little in the way of economies of scale and hence favour small and micro-enterprises (Bartone 1995). Many of these enterprises are by nature labour-intensive and can be used to generate economic activity and employment in the neighbourhoods they serve. In many cases, MSWM partnerships will generate opportunities for community- and group-based small enterprises. MSWM partnerships can help improve overall economic efficiency by stimulating the business linkages that will result from the commercial relationships among the many enterprises that make up the private sector component of the MSWM chain.

The commercial mechanisms these partnerships will use are standard and well established; their strengths and weaknesses are clearly understood. Most MSWM partnerships will use only one or two of a limited range of basic commercial mechanisms, of which there are four that are used in one form or another for virtually all MSWM partnerships (adapted from Cointreau-Levine 1994):

- 1 *Contracting*: whereby a municipality awards a contract to one or more firms to provide services. Service contracts are used for waste collection, transportation, and landfill management.
- 2 *Concession*: whereby a municipality gives an enterprise the right to build and operate a waste facility. Concessions are usually awarded on a build-own-operate (BOO) or build-own-operate-transfer (BOOT) basis. Concessions are com-

monly awarded for transfer stations, landfill development, recycling plants, and incinerators.

- 3 *Franchise*: whereby a municipality awards, usually via competitive tendering, a limited monopoly in a defined area for a limited time. Franchises are commonly used for residential waste collection.
- 4 *Open competition*: whereby a municipality registers or licenses a number of enterprises as 'approved service providers' and then encourages the approved providers to compete freely to provide a defined range of services. Open competition is often used for industrial waste collection.

The Cairo Declaration of Principles

There is little mystery surrounding the respective component parts of public-private partnerships. Public sector responsibilities, resources, and procedures are apparent and understood, as are the types of private sector enterprises likely to be involved and the commercial mechanisms they will use. The mystery—and the challenge—lies in the nature of the interface between them, that is, in the details of the partnership itself. Hence the immediate task facing those with MSWM responsibilities, as well as those concerned with environmental, economic development, and employment creation, is to develop and disseminate practical tools for building and managing successful sustainable public-private MSWM partnerships. Taking the mystery out of 'partnering' proven and positive aspects of the public and private sectors will result in greatly enhanced overall MSWM capacity, increased employment, enhanced overall economic productivity, and reduced negative environmental effects.

The Cairo Workshop on Micro and Small Enterprise Involvement in Municipal Solid Waste Management in Developing Countries produced a Declaration of Principles to

stimulate and guide the process of developing sustainable MSWM partnerships. These Principles identified five key areas that must be addressed if there is to be both the enabling environment and the local capacity needed to create and maintain effective MSWM partnerships:

- 1 *Legitimisation of MSEs and contractual commitments*: national policies will need to be developed, and local by-laws amended, to facilitate private sector involvement in MSWM. Contracting arrangements will need to be fair and transparent; contracting periods will need to be of sufficient duration to attract the private sector's capital and commitment.
- 2 *Finance and cost recovery*: cost-recovery models must be clear and transparent. Financial systems should reflect an overall 'willingness and ability to pay'. Standards of accountability must be high and apply equally to all parties involved. Support for micro-institutions and guarantee funds might be needed to stimulate micro- and small enterprise involvement.
- 3 *Capacity building in technical skills*: municipal authorities need to understand the working practices and the strengths and limitations of their private sector partners if they are to design and administer efficient sustainable partnerships. The private sector will need assistance in recognising and capturing the opportunities that partnership possibilities generate, and they will need support if they are to work to the technical, environmental, and social standards mandated by the public sector.
- 4 *Citizen responsibility and public cooperation*: MSWM becomes more efficient in both environmental and economic terms when informed citizens insist upon and participate in responsible waste management practices.
- 5 *Scaling up MSE participation*: national policy and municipal-level strategic plans should provide for large-scale MSE involvement in MSWM. Public sector insti-

tutions and departments should expand their degree of active interface with MSEs both to raise capacity and monitor performance. NGOs and enterprise development agencies should be encouraged to support the introduction and diffusion of best practice among MSEs involved in MSWM (UMP/SDC/SKAT 1996b).

Conclusion

The public sector will need to learn about the workings and motivations of the private sector if the mystery is to be taken out of the public-private interface. If the growing populations of the world's cities are to be well served, the public sector must learn how to bring the power of the private sector to bear on MSWM responsibilities. To do this effectively, they must acquire the skills to design and supervise programmes that enable the private sector to participate as an active partner in all stages of MSWM. The Collaborative Group for MSE involvement in MSWM will continue to encourage and support this process.

Note

- 1 This definition is derived from the findings of a workshop on 'Business Opportunities for SMEs in Urban Environmental Fields' for African municipal executives and administrators, sponsored by the International Training Centre of the ILO, Turin, Italy, 9-13 December 1996.

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An innovative community-based waste disposal scheme in Hyderabad

Mariëlle Snel

Introduction

A community-based voluntary waste disposal scheme, implemented in 1992 in Hyderabad, is one of the first of its kind in India being launched by an urban civic body with the assistance of NGOs and community-based organisations (CBOs).¹ Its purpose is to help keep neighbourhoods (or colonies, as they are often called in India) clean as well as to make it quicker and more effective to lift waste with the help of employees of local organisations; to involve waste-pickers who collect the waste; and in order to develop a favourable social climate within which to educate citizens on the importance and economic value of waste.

The inclusion of waste-pickers from the informal recycling sector provides a main linkage to the formal sector of Municipal Waste Management (MWM).² They are not

only capable of handling the collection of waste from each household (where Municipal Corporation of Hyderabad trucks cannot reach it) and transporting it to the municipal waste bin, but also of integrating the collection of waste with the existing recycling activities of the informal sector. This scheme could, therefore, potentially provide a large portion of these waste-pickers with sustainable work that is both economically and environmentally viable.

Labour-intensive segregation of waste by informal sector workers for recycling by factories, as well as the establishment of compost plots at the local level, designed and organised by the Municipality and the NGOs or CBOs, represent realistic steps towards the use of more ecocentric approaches in future MWM which are at the same time cost-effective in terms of natural resources.³

Hyderabad's community-based waste disposal scheme

The economic objectives of the scheme are not only to make waste management more effective, and to link up with the informal recycling activities, but also to increase the utilisation of biodegradable waste collected for the production of compost by introducing vermiculture and composting methods.

The Municipality was estimated to produce around 660 tonnes of organic manure per day during 1994; by 1999 this will rise to 1,800 tonnes per day. Other possibilities, such as the future production of fuel pellets, are also being examined. Social objectives include the rehabilitation of between 10,000 and 20,000 of the approximately 35,000 waste-pickers in Hyderabad by providing them with work, free medical treatment, allowing them to sleep in night shelters, and providing non-formal education and vocational training (*Newstime* 1994).

The scheme started in June 1993 and is managed by community- or neighbourhood-based organisations (NBOs) within middle- and upper-income areas. At present, 167