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Workshop Report

Solid waste collection that benefits the urban poor

9 to 14 March 2003

Dar es Salaam, Tanzania



CWG

**Collaborative Working Group on Solid Waste Management
in Low- and Middle-income Countries**

**edited by Adrian Coad
for the Skat Foundation**

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1 Introduction

1.1 The theme of the workshop

Solid waste collection that benefits the urban poor

Many of the cities in the developing world rank solid waste management as one of their major concerns. It is easy to understand why. As urban populations grow, waste collection services seem to fall further and further behind, and piles of waste grow relentlessly, blocking drains and even roads. The smells of rotting garbage and of the smoke from burning waste are well known in many cities. Increasing numbers of flies, mosquitoes and rats are causing concern to public health specialists. It is the urban poor who are most familiar with these conditions, because they are too often accorded the lowest priority in the allocation of resources for waste collection.

The objective of the workshop that is described in this report was to find realistic ways to improve the living and working environments of the urban poor through improved waste collection. By drawing on the experience of the public and private sectors, including informal initiatives and community-based approaches, lessons would be learned and new strategies forged.

The subject of solid waste collection has not been the main theme of any previous CWG workshop. It is not as fashionable as waste minimisation and recycling. It does not lend itself to academic research in the same way as treatment and disposal. And yet in most situations the expenditure by municipalities and residents on solid waste collection, and the human resources involved, are very much greater than other aspect of waste management. Effective collection of solid waste has a huge impact on the urban environment, with the potential to reduce flooding, the transmission of disease, and infestation by rodents, to alter perceptions and deliver economic benefits

Various forms of private sector initiatives spring up or come in to fill part of the gap in waste collection services, but not without problems, failures and worries. Public-private partnerships are often more a case of one side dominating the other than a true partnership. Cities struggle to monitor, co-ordinate and control private sector service providers. Again and again unsuitable vehicles are purchased to collect waste, quickly falling into disrepair while the loan must still be repaid and the solid waste accumulates.

How can solid waste collection benefit the poor?

- Firstly, the poor are usually the last to receive a waste collection service, or the first to lose it. This is the result of a range of factors, including the fact that the poor have least political influence and have less cash to pay private operators, while their waste is more difficult to collect.
- It has been clearly shown that solid waste collection can generate employment. But what can be done to ensure that labourers are not exploited, being paid low wages for irregular work with no protective clothing or other safeguards? How can employment opportunities be maximised, by preferring labour-intensive methods to sophisticated machinery?
- Many cities have huge informal networks engaged in recycling solid waste. Separation and reprocessing of recyclables provide a livelihood for large communities. In some cities these livelihoods are threatened by new approaches, including the involvement of large international contractors. How can these livelihoods be safeguarded?

1.2 The background to the Workshop

The *Collaborative Working Group on Solid Waste Management in Low- and Middle-income Countries* (the CWG) is international, focused and informal. It aims to achieve fundamental changes in the approach to urban solid waste management in low- and middle-income countries, through knowledge sharing, capacity building and policy advocacy.

Since 1995 the CWG has organised a series of international workshops on topical aspects of solid waste management. This report describes the workshop that was held in Dar es Salaam, Tanzania from 9 to 14 March 2003, with the title "Solid waste collection that benefits the urban poor".

This theme had been identified at the previous workshop (Manila, 2000) and was concerned with finding ways of extending solid waste collection services to include the urban poor, with improving livelihoods associated with waste collection in both quantity and quality – the poor as service recipients and as service providers.

Dar es Salaam was chosen as the venue for the Workshop because of the striking improvements in solid waste collection that had been achieved in the previous decade. These improvements had resulted in new waste collection services in some of the low-income areas of the City and opportunities for unemployed people to find work in small and medium-sized waste collection enterprises. The International Labour Organisation (ILO) has been active in supporting these enterprises and was ready to lend its expertise in support of the Workshop. The City Authorities had proved to be helpful and welcoming to enquirers from outside wishing to learn more about what had been achieved. Previous contact with managers and members of some of the waste collection enterprises had shown that they were enthusiastic and able communicators, and so the opportunity of interacting with them made the venue of Dar es Salaam very attractive.

1.3 The structure of this report

The report is in three parts. The first part summarises the programme and outputs of the Workshop, and introduces the annexes. The annexes contain more detailed information, such as contact details for all the participants and abstracts of the papers that were presented. The editor noticed large variations in the use of words and technical terms, so some observations and definitions are provided in Annex 12. The accompanying compact disc (CD) offers the papers that were presented, the PowerPoint presentations that were used during the Workshop, summaries of discussions, photographs and other supporting material. This printed report is also available on the CD and acts as a guide to direct the user to papers and other information.

1.4 Intended readership

This report is written mainly for the participants who attended the meeting in Dar es Salaam, to act as a reminder and souvenir, and a resource for reference. It is hoped that the addresses and photographs will assist in on-going networking.

Others with a concern to make solid waste collection services more pro-poor will find a wealth of new information here with case studies, research papers and reflections on issues, problems and solutions concerned with improving the living conditions and livelihoods of the urban poor. There is also information about the CWG, both past achievements and future plans, and it is hoped that this information will lead to wider networking between solid waste management practitioners. Perhaps also this report will give some ideas to those who are planning and organising other workshops.

1.5 Participation at the workshop

Papers were selected for relevance to the theme and to recount experience rather than to present propositions. There were four participants from Asia, two from Middle East and one from Central America sponsored from workshop funds. Most participants were from Africa and Europe, but those from Europe had extensive international experience. Participants at previous workshops had stressed importance of having a good proportion of municipal representatives so it was pleasing that so many participants were employed by local government. A full list of participants and their contact details can be found in Annex 1, and some statistics related to participation are given in Box 1.

Box 1 Participation at the workshop	
Number of registered participants *	84
Number of additional franchisees	14
Maximum participation on any day	95
According to location	
Number of Tanzanian participants *	24
Number of participants based in Africa *	57
Number of participants based in Europe	18
Number of participants based in Asia	4
Number of participants based in the Middle East	2
Number of participants based in Latin America	3
Total number of countries represented	28
Number of African countries represented	13
According to sector	
Government (mostly local government)	30
Non-governmental organisations	10
Private sector	21
Multilateral and bilateral development	12
Research and education	11

* including three franchisees who participated throughout the workshop

1.6 Acknowledgements

The preparation and running of this workshop needed considerable financial support. The German organisation – Gesellschaft für technische Zusammenarbeit GmbH (GTZ) was the first to commit itself to this project with a grant that enabled the whole process to start and other sponsors to be approached. The DGIS of the Netherlands Ministry of Foreign Affairs has been a strong supporter of initiatives in solid waste management, and again provided a large share of the finance. The Swedish International Development Agency (Sida), joined them by providing another major contribution. The Swiss Agency for Development and Cooperation, which was a founder partner of the CWG and was the main sponsor of early CWG workshops, also provided an important contribution. The International Labour Organisation (ILO) provided some valuable financial support in addition to considerable practical expertise. In a new development, the Swiss NGO, the Stanley Thomas Johnson Foundation, joined the group of sponsors as the first NGO to do so. InWEnt¹ played a major role by sponsoring six presenters and inviting and sponsoring a number of participants from African municipalities and enterprises. The generous contributions of all these supporters, and the expressions of confidence in the CWG associated with this support, are most gratefully acknowledged. These funding agencies have generously provided financial support, but they do not necessarily share the views expressed in this report. Responsibility for the content of the report rests entirely with the editor and the Skat Foundation.

The organisation of the workshop was greatly helped by many forms of practical support. The Dar es Salaam City Council and its three Municipal Offices provided guidance, welcome and

¹ InWEnt – Internationale Weiterbildung und Entwicklung gemeinnützige GmbH (Capacity Building International, Germany) is an organization for international human resources development, advanced training and dialogue. It was established through a merger of Carl Duisberg Gesellschaft e.V. (CDG) and the German Foundation for International Development (DSE).

encouragement, as well as valuable inputs during the workshop. The ILO, particularly Mrs Alodia Ishengoma of the Dar es Salaam Office, provided invaluable help and advice, especially regarding liaison with the enterprises and in keeping the lines of communication open. The leaders and members of the waste collection enterprises - usually here referred to as “franchisees” – provided very important inputs to the programme, giving up valuable time and sharing honestly and patiently regarding their situations and challenges. The authors of the papers are to be commended and thanked for their efforts to produce useful and comprehensive discussions of their insights. Many others enriched the meeting in diverse ways – the local co-ordinator, Ryubha Magesa and his hard-working team in the workshop office, reviewers, rapporteurs, chairpersons and facilitators, members of the steering group and countless others with contributions and a readiness to volunteer their help. The GTZ office in Dar es Salaam provided practical help that was of great value to the organisers. The amenities of the White Sands Hotel and its hardworking and friendly staff were also much appreciated.

The cover photograph was provided by Gereon Hunger and shows waste collection in Maputo.



The team ↑

↓ Alodia Ishengoma with city officials and franchisees from Dar es Salaam



2. The programme of the workshop

2.1 The objectives of the programme

The programme was built of a number of basic blocks. These components are introduced in this section and presented in more detail in Section 2.3.

2.1.1 Learning from Dar es Salaam

As has already been explained, the main reason for holding the workshop in Dar es Salaam was to give participants an opportunity to meet the city officials and franchisees of Dar es Salaam, thereby learning from the experience of that city. This process started with presentations by the Head of Solid Waste Management and the ILO staff member who has been most involved in supporting the franchisees. This was followed by initial group discussions. Working groups then discussed with several franchisees, and later went on site visits to see where and how these franchisees were working. Finally these groups met to review what they had learned and prepare a SWOT analysis. Notes summarising the discussions with franchisees can be found in Annex 3, and a discussion of the SWOT analyses is reproduced in Annex 4.

2.1.2 Learning from experience elsewhere

Ten case studies from elsewhere in Africa, and from Asia and Latin America were presented briefly. There was a short opportunity for discussion after each, and a chance to discuss five of the papers in more detail in a discussion group. The papers are listed in the following section (2.2).

2.1.3 Topical papers

Some of the papers concentrated on a particular topic or theme rather than giving comprehensive information about waste management in a particular location. The topics were

- ◆ private sector participation
- ◆ equipment, facilities and design, and
- ◆ other institutional aspects

These presentations were followed by discussion groups that sought to apply key points to the situation in Dar es Salaam.

2.1.4 Open discussion

Most of the programme was focusing on the theme "Solid waste collection that benefits the urban poor". However there was one session of plenary discussion and two "open space" sessions that included other issues of solid waste management. More information on these discussions are included in Annexes 5 and 6 respectively and on the CD.

2.1.5 The development of the Collaborative Working Group

There has been a growing awareness that the CWG needs to play a bigger role in support of improved solid waste management in low-income countries. Up to the time of this workshop, the CWG had mainly been active in the workshops. In order to develop proposals for a more effective CWG, there was a plenary meeting at the start of the programme, at which a working group was established. This group met on several occasions during the workshop and presented its findings

and recommendations to a second plenary CWG business meeting at the end of the programme. The document developed by this group and ratified by the plenary meeting can be found in Annex 7.

2.1.6 Informal networking

The formal programme has been described above. However, the informal side of the programme was also regarded as very important. The venue was about 25 km from the centre of Dar es Salaam, and all except participants from Dar es Salaam were resident there, so there were many opportunities for discussions, and for developing or renewing links.

2.2 The presentations

Twenty-three papers were prepared for plenary presentation at the workshop. Three authors were unable to attend and present their papers because of personal circumstances; one of these papers was presented by a participant who was familiar with the situation described.

The abstracts of the papers can be found in Annex 2, and the complete papers, the PowerPoint presentations that were used to introduce some of them, and a record of the discussion that followed the presentations are all available on the accompanying CD. Some other relevant papers, some related to posters and some made available to participants, can also be found on the CD.

Most of the papers that were presented were made available on the Skat Foundation web site before the workshop so that participants could read the papers before travelling to Dar es Salaam, and in order to reduce the need for photocopying by workshop staff. Participants were requested to submit comments on the papers, and those that were received can also be found on the CD.

The numbering of the papers is not consecutive – the general theme of the paper is indicated by the first digit as explained in Annex 2. For this reason there are gaps in the numbers.

The following list provides the numbers, titles, authors and locations of the papers, and the schedule of the presentations is given in the next section.

Number	Title	Author and location
1	Solid Waste Management in Africa: - a WHO / AFRO perspective	Hawa Senkoro, Africa
2	Community-based Enterprises: Constraints to Scaling up and Sustainability	Mansoor Ali Bangladesh & Zambia
4	Structuring solid waste collection services to promote poverty eradication in Dar es Salaam - the ILO experience	Alodia Ishengoma Tanzania
5	Social aspects of partnerships	Kelly Toole et al. International
10	From two thousand to two million - The evolution of a community-based primary collection model in India	Vivek S Agrawal, India
11	Community managed primary waste collection in two squatter settlements in Karachi	Noman Ahmed, Pakistan
12	Partnership For Change: Bringing stakeholders together to manage solid waste in a low-income community in Delhi	Sanjay K Gupta, India
13	Windhoek's waste management strategy for informal settlement areas	Sap Joubert, Namibia
14	Helping microenterprises to work with low-income communities in Lusaka	Ireen S Kabuba, Zambia
15	Informal privatisation of garbage collection and disposal services in Nairobi: - socio-economic contributions	Anne M Karanja, Kenya

16	Improving the stakeholder involvement in solid waste collection in Bamako	Modibo Kéita, Mali
17	Serving the Unserved: Informal refuse collection in Mexican cities	Martin Medina, Mexico
18	Incorporating slum dwellers in solid waste collection programmes in Bangladesh	Shaikh Ferdausur Rahman, Bangladesh
19	From community-based organisation to low-income private contract for solid waste collection in a poor settlement	Guéladio Cissé, Côte d' Ivoire
30	A comparison of three waste collection systems appropriate to formalising communities in southern Africa	Ray Lombard et al., South Africa
31	Integrating local community-based waste management into international contracting	Laila Iskandar, Egypt
32	Robbing Peter to pay Paul: The taboo effects of landfill privatisation on waste collection	Anne Scheinberg et al., International
33	Planned versus spontaneous privatisation - assessing performances of public and private modes of solid waste collection in Accra, Nairobi and Hyderabad	Johan Post et al., Ghana, Kenya & India
40	Innovative Small Transfer Station provides a role for the urban poor in refuse collection	Manus Coffey, International
41	Waste carts: Issues for poor waste collectors	Jonathan Rouse, International
42	Tailor-made collection system for high-density waste in Gaza	Manfred Scheu, Palestine
50	Capacity building for waste collection in low income areas: developing user-friendly guidelines for municipalities	June Lombard, South Africa
51	Building stakeholder capacity for Integrated Sustainable Waste Management planning	Jane Olley, India, Mali & Honduras

2.3 The Programme in more detail

Sunday 9 March 2003

Session 0	Theme: Workshop on proposals for the future of the CWG
2.00 to 5.30	Discussion of role, strategy and development for CWG. Opportunity for comment on workshop arrangements and programme. Working group set up to prepare proposals for Friday's business meeting.
5.30 to 6.30	Registration
6.30 to 7.30	Reception and introductions
7.30	Dinner

(programme continues overleaf)

Monday 10 March

Session 1A	Theme: Starting off	Chair: Adrian Coad
8.30 – 9.00	Introductions and welcomes, objectives for the workshop	
9.00 – 9.15	Objectives and mechanisms of workshop (A key objective is to work together to develop a practical guidance document on refuse collection and the poor.)	
9.15 - 9.30	The new InWEnt programme	Berthold Volberg
9.30 – 10.15	Keynote papers – Mansoor Ali (Paper 2) and Anne Karanja (Paper 15)	
10.15	Official welcome and opening of workshop by the Deputy Mayor of Dar es Salaam, Councillor Hanzurun Mungula, and the City Director, Mr. Wilson C Mukama. (Their speeches are on the CD.)	

break

Session 1B	Theme: The situation in Dar es Salaam	Chair: Juerg Christen
10.45 – 12.30	Presentations by city authorities and ILO	Elias Chinamo & Alodia Ishengoma

lunch

Session 1C	Theme: Learning about partnerships	Chair: Kees van der Ree
2.00 – 2.45	Social aspects of partnerships (Paper 5)	Kelley Toole
3.00 – 4.00	Working groups to prepare for session with franchisees	

break

Session 1D	Theme: Case studies from other cities	Chair: Mansoor Ali
4.00 – 5.30	Brief presentation of four case studies Papers 14, 10, 11 & 13	

7.00 Dinner

Session 1E	Theme: Poster session	
8.30 – 10.00	Participants have an opportunity to look at and discuss posters, videos and publications	

Tuesday 11 March

Session 2A	Theme: Case studies from other cities	Chair: Cecilia Kinuthia-Njenga
8.30 – 10.15	Brief presentation of four more case studies: Papers 17, 12, 18, 16	

break

Session 2B	Theme: Getting a better understanding of selected case studies	
10.45 – 12.30	Deeper discussion of case studies in five groups Group photograph	

lunch

Session 2C	Theme: Learning from franchisees in Dar es Salaam	
2.00 – 3.30	Working groups for informal discussions with franchisees	

break

Session 2D	Theme: Involving the private sector	Chair: Rueben Lifuka
4.00 – 5.30	The impact of public-private partnerships on the poor Papers 30, 31 & 32	

Wednesday 12 March

Session 3A	Theme: Involving the private sector	Chair: Martin Medina
8.30 – 9.00	One further paper to be presented (Paper 33)	

break

Session 3B	Theme: Site visits in Dar es Salaam	
9.15 – 12.30	Visits to offices and areas of franchisees, in five separate groups	

lunch

Session 3C	Theme: Further reflections on developments in Dar es Salaam
2.00 – 3.30	Group discussions and feedback on key lessons learned; SWOT analysis

break

Session 3D	Theme: Further discussion of the impact of private sector involvement
4.00 – 5.30	Four groups, each to discuss one paper - papers 30, 31, 32 and 33.

dinner out: 6.30 departure

Thursday 13 March

Session 4A	Theme: New approaches to vehicles and equipment	Chair: Christian Nels
8.30 – 10.15	Presentation of three papers (Papers 41, 42 and 40)	

break

Session 4B	Theme: Capacity building and planning	Chair: Chris Zurbrugg
10.45 – 12.30	Papers 50 and 51 and a questionnaire on knowledge sharing	

lunch

Session 4C	Theme: Applying ideas to the local situation	Facilitator: Anne Scheinberg
2.00 – 3.30	Six working groups: covering organisational design, SWOT analysis and applying themes related to the morning's papers to Dar es Salaam.	

break

Session 4D	Theme: Plenary discussions	Chair: Rueben Lifuka
4.00 – 5.30	Written questions from participants discussed in a plenary session (Annex 5)	

7.00 dinner

Session 4E	Informal discussion of posters or other issues
8.30 – 10.00	Presentation of multinational company's research and video on plastic bags in Mali

Friday 14 March

Session 5A	Theme: Open space	Facilitator: Christian Nels
8.30 – 10.15	Brief presentations of topics suggested for group discussion, and formation of five groups for discussing these issues. (Annex 6)	

break

Session 5B	Theme: Open space; second round	
10.45 – 12.30	New topics for continuing discussions in open space groups, and reporting back Completing assessment questionnaires on the workshop (See Annex 9).	

lunch

Session 5C	Theme: Planning CWG and InWEnt programmes	Chair: Mansoor Ali
2.00 – 5.00	Dividing into two groups – one to consider proposals of CWG working group (presented by its chair, David Wilson), and one to discuss the next steps in the InWEnt capacity development programme.	

break

Session 5D	Theme: Conclusion of workshop	
5.30 – 6.00	Presentation of SWOT analysis Official closure of workshop by Kinondoni District Commissioner, Mr Athuman Mdoe and Mr Raphael Ndunguru, representing the City Director.	

3 Discussion and conclusions regarding waste collection and the poor

This chapter seeks to bring together the main points from the workshop. In addition it can also serve as a topic index, suggesting papers that give more information, with links to them in the CD version. This chapter is a compilation of comments and observations of many participants; it has not been possible to acknowledge the sources of many of the comments or ideas, but clearly it is the result of many contributions and joint work.

3.1 The urban poor and solid waste

There are three aspects to consider in this connection:

- **service for the poor** - to improve the environmental conditions in which the poor live, in the hope that this will improve their health and motivate other interventions to improve their housing and living conditions;
- **service by the poor** - to provide employment that is relatively stable and decent (both in terms of the rate of pay and of working conditions)
- **minimising threats to existing livelihoods** - In attempts to modernise or improve efficiency, governments may set up methods of waste management or institutional arrangements that exclude the poor from the waste on which their livelihoods have been based - either denying them access to waste for recycling or preventing them from continuing to provide a service.

The following sections discuss these three aspects.

3.1.1 Waste collection services for the poor

Few cities in middle- and low-income countries would claim to collect all of the waste that is generated. In most cases the majority of the uncollected waste is generated in the poorer neighbourhoods - the poor have lowest priority. Some of the reasons why wastes from poor areas are not collected are:

- **difficult access:** It is difficult to gain access to a large proportion of the dwellings in low-income areas because access lanes are narrow, poorly drained, not surfaced and unplanned. (For example, in Dar es Salaam and Khulna there are areas where the access lanes are too small to be reached even by a handcart.) Many dwellings are located at considerable distance from a road that is large enough for even a small truck. Unpaved lanes may be impassable in the rainy season.
- **low social status:** The poor have the lowest social status and so they are regarded by city authorities as having the lowest priority. In many cases they have very little political influence, and so any requests for improved services are not given attention.
- **Lack of land tenure and low level of tax payment** are seen as barriers to the provision of formal waste collection services. Informal, squatter or formalising areas may be regarded as having no right to any municipal services or support.
- **awareness:** Lower levels of education and lower awareness of the links between hygiene and disease transmission may result in waste management being given a low priority by the low-income groups themselves, and so there is a lack of interest in supporting a solid waste collection service.
- **political will:** There may be a lack of political will on the part of elected representatives. Sanitation services such as waste collection seldom figure in their speeches and programmes.

- **lack of incentives:** Waste collectors may ignore low-income areas because they do not expect to receive tips or additional informal payments, or opportunities for providing additional services, in such areas.
- **lower value of waste:** The waste itself is likely to have less value in low-income areas, where consumption and wastage are less, where defective items are repaired rather than discarded, and where the residents themselves sell for recycling items that might be discarded by more prosperous households.

Since poor areas tend to be ignored, there is a need for specific, targeted initiatives to ensure that services are extended to the poor. There are several important reasons for such initiatives. One is humanitarian solidarity - the desire to help our fellows. But aside from all altruism, there are health implications that can affect the whole city. If disease vectors are allowed to breed freely in poorer districts, they can fly or run to more affluent areas, carrying their cargoes of germs. Smoke from waste that is burned in poor areas may drift into the homes and lungs of the prosperous. Flooding caused by blocked drains in low-lying areas colonised by the poor can back up to cause problems upstream. Disease has economic implications that affect the whole country. Recently there has been a growing awareness that poverty can have an impact on security and political stability, and, in many cities, observable differences in environmental sanitation emphasise the gulf between the "haves" and the "have nots".

These are clear reasons for focussing efforts on ensuring waste collection services for the poor.

3.1.2 Provision of waste collection services by the poor

Solid waste collection, street sweeping and drain cleaning are very labour-intensive activities. In most cases the work is done by the poor. (In some cities this last statement may be complicated by social or ethnic norms which restrict this occupation to particular castes or groups. Trade unions in some cities have negotiated pay rises and working conditions for waste management workers which are the envy of manual workers in other fields, but in general waste-related services are provided by the poor, and there is considerable pressure to keep waste management wage costs as low as possible.)

Since manual work in solid waste management requires little capital equipment and little training, solid waste collection provides important opportunities for providing much-needed employment for the poor. However, as we will see later in this chapter, the creation of decent work in this field requires an enabling municipal framework, even if the municipality is not providing the service - and most of the initiatives that are described here come from the private sector². There is a danger that city managers and international contractors may wish to use equipment and methods that have been developed for industrialised countries and are therefore capital-intensive, requiring only small numbers of operators. Such capital-intensive machinery is usually unsuitable in low-income countries for a number of reasons, among which is the importance of using solid waste management to generate employment by using labour-intensive methods whenever they are appropriate and competitive.

3.1.3 The impact of waste collection arrangements on the poor

This third issue refers to disturbance of existing livelihoods related to waste management, particularly in the field of waste recycling, but also in relation to waste collection. Both technical and institutional changes affect these livelihoods.

Informal waste recycling is often opposed by municipal authorities because the separation of recyclable items from mixed waste in the street, and the storage of separated items, can result in scattered waste and the untidy appearance of streets and open spaces. When waste pickers scatter

² Here the term "private sector" is used in a broad sense, to include also informal enterprises that are not registered as businesses and community-based enterprises that may be more motivated by the needs of the community than a desire to generate profit.

waste at collection points, they are increasing the work that must be done to load the waste into trucks. However, this recycling reduces the amount of waste requiring disposal and, in many cities, is the basis for important economic activity that provides livelihoods and affordable goods for a significant proportion of the community. In spite of these environmental and economic benefits, municipal officers are often hostile to this informal recycling.

In order to reduce costs, waste managers may seek to avoid double handling (during the collection of solid wastes) by storing waste in containers so that the waste does not touch the ground at transfer points but is tipped directly from the container into the truck, or the container itself is taken away with the wastes inside. Although on paper such a system is more efficient and hygienic, in practice waste pickers may take the waste out of the containers to look for items that can be sold for recycling, and so the waste is scattered on the ground. In many cities the waste pickers have no alternative source of income, so that they do whatever is necessary to ensure their livelihoods. These informal sector recycling workers may lose access to waste in other ways as new waste collection systems are introduced. One of the papers (Iskandar, Paper 31) gives an example of where large-scale contracting threatens the livelihoods of small-scale waste collection contractors and a very substantial waste recycling sector. Such cases illustrate the importance of involving all stakeholders in the planning of improvements and initiatives - a theme that was often repeated at the workshop. If solutions that are acceptable to all are not found, the results can be drastic impoverishment of a significant community or failure of a new collection system, or both.

In many cities, waste collectors and street sweepers have set up informal but comprehensive systems for supplementing their municipal salaries with income from recycling and by doing extra informal paid work for individual households (such as sweeping their yards or carrying their waste). This is referred to in Paper 62 by Ali. It is important to take these arrangements into consideration when planning changes so that the labourers do not suffer unduly, and also to avoid stiff resistance to the proposed changes.

Stakeholders tend to become polarised into two camps: waste managers tend to look for modern technology and reduced wages costs, but pay no attention to needs of the informal communities that survive through waste recycling. Environmentalists and social scientists have a strong concern for the well-being of the threatened citizens but are not concerned by the financial constraints under which the municipal administration is operating. Both groups should work together to find sustainable and equitable solutions.

3.2 What types of waste management arrangements can benefit the urban poor?

3.2.1 Arrangements between stakeholders

Most current arrangements for collecting waste from poor urban districts fall within a broad definition of private sector participation. Services provided to the poor by the poor mainly involve informal or small private organisations, which concentrate on primary collection and recycling unless obliged by local government to also cover the secondary transport stage. Of course there are exceptions. Some local governments have realised the important role of the informal sector and are trying to integrate it into existing structures. Municipal workforces are generally overstretched, with inadequate resources to provide a regular waste collection service to all within the urban area. Therefore they tend to provide a service to the commercial and more prosperous areas and offer some backup to whatever services may exist in the poorer areas. Many waste collectors in low-income areas are informal, meaning that they are not registered as businesses and have no legal arrangement with municipal authorities regarding the collection of solid waste. Even among the formal service providers, there is a range of possible arrangements with the municipal authorities.

In all such arrangements it is important to keep in mind the three main groups of stakeholders, to ensure that their interests are taken into consideration (Figure 3.1).

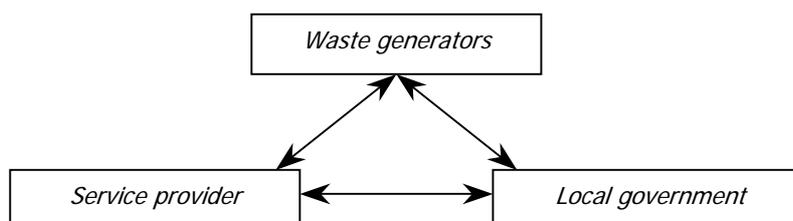


Figure 3.1 The three main groups of stakeholders

In this context the three basic types of arrangement are

- Contract, in which case the service provider is paid by the local government. Examples are the cases in Windhoek (Paper 13) and Hyderabad (paper 33).
- Franchise, in which the local government grants a monopoly for providing a service for a specified time in a specified area, and the service provider (the franchisee) is responsible for collecting a fee from the waste generators - for example, in Dar es Salaam (Papers 3, 4 and 71)
- Open competition or private subscription, when any qualified service provider can contract with any waste generator for the collection of their waste, and there is ongoing competition for business between the service providers. Much of Nairobi is served by this type of arrangement (see Papers 15 and 33). Whilst there is no system for qualifying service providers in Nairobi, a scheme for registering contractors that has been set up by the Environmental Council of Zambia is mentioned in Paper 14.

These three types of arrangement are discussed in more detail in *The Guidance Pack on Private Sector Participation in Municipal Solid Waste Management* by Sandra Cointreau, which is available on the accompanying CD.

Private sector participation is clearly a central issue in the provision of waste collection services to the poor and by the poor. It is important to remember that there is a wide range of options in terms of arrangement, partner and service.

In 1994, when the municipal solid waste collection service was utterly inadequate, Dar es Salaam began to franchise solid waste collection to local enterprises. Initially the enterprises were commercially oriented and relatively large. The enterprises that are currently collecting waste have arisen in a variety of ways. Some can be described as purely commercial, and are involved in solid waste collection simply because it provides an opportunity for generating a profit. Such organisations are likely also to be involved in other commercial activities. Some enterprises were set up as a means of generating employment for members of the community, and may have tried other commercial activities before starting on waste collection. Other enterprises were born out of concern to improve the living environment in the vicinity of the members' houses. Some were started because of tragic or unfortunate incidents involving children who were carrying the household's waste (sometimes done at night to avoid being seen depositing the waste). As the initial motivations vary, so does the willingness to work as an unpaid volunteer when finance is short.

3.2.2 Support for service providers

Some of the aspects related to setting up and running an enterprise are listed in Box 2

Box 2 Tasks involved in starting and running an enterprise

formulating initial proposal	planning
data collection	raising community awareness
preparing proposals	management of personnel
negotiating with authorities	salaries, accounts and financial management
arranging financial support	fee collection, dealing with defaulters
capacity building of enterprise staff	monitoring and reporting
selection and provision of equipment	evaluation, and remedying shortcomings

These tasks cover a wide range of skills and it cannot be expected that a small, new enterprise will have access to all of them, or even most of them. Even large commercial enterprises that have been operating in other sectors (such as transport) will probably have little knowledge in the fields of public awareness and fee collection.

The need for external support becomes clear. Figure 3.2 shows how the support agency fits into the three partner structure of Figure 3.1. The case studies showed that this support could come from various sources:

- *International agency* - The International Labour Organisation has been playing an important role in Dar es Salaam (Paper 4) and has also provided some assistance in Lusaka (Paper 14). This support has mainly been in terms of training courses, though, in addition, the provision of some equipment was arranged. It is likely that the personal interest and concern of the ILO staff has also been an effective encouragement to franchisees during difficult days. One franchisee at the workshop mentioned that the training had been particularly helpful in dealing with customers who refused to pay, and resulted in increased fee collection rates (Annex 3, A3.5). It was also suggested that certificates showing attendance at training courses could be a useful asset when bids are being evaluated.
- *Non-governmental organisation* - NGOs were instrumental in supporting the creation of waste collection enterprises in India (Papers 10 & 12), Pakistan (Paper 11), and Bangladesh (Paper 18). In Mali an international NGO was involved (Paper 16). The degree to which the NGOs have been involved varies greatly - in some cases the NGO is regarded as the service provider.
- *Contract partner* - The Billy Hattingh model of South Africa (Paper 30) integrates an external expert as a contract partner. The expert arranges finance and the provision of equipment, provides training and practical guidance, and acts as a mentor and advisor. This support is most intense during the first five-year contract period, and ceases after the second period. This approach can only work when there is sufficient funding to pay the fees of the expert, and it is clearly important that the expert has the necessary skills and experience, so that the advice meets the needs. In this way unemployed community members have developed the skills needed to run a business and provide a satisfactory waste collection service.
- *Influential local citizen* - Another source of support, mentioned in Paper 2, is a local citizen with the vision and the personal contacts to run a collection service in his area. He provides training and advice to people running similar schemes in nearby areas.

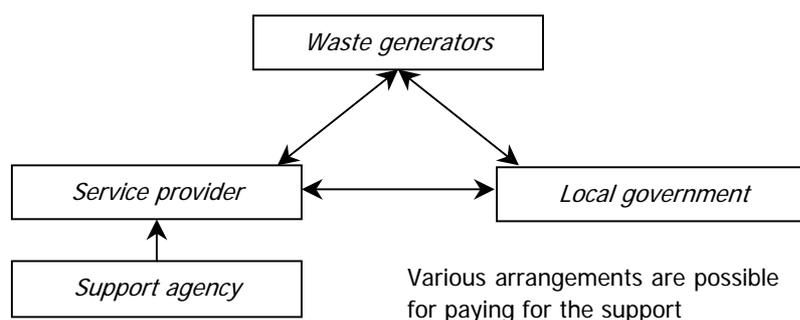


Figure 3.2 The inclusion of a support agency

The issue of payment for the support is an important one. Haan³ argued strongly that support for small enterprises should be only on the basis of payment. In this way there are no complaints of favouritism or unfair treatment, and only training that is perceived as valuable by entrepreneurs is provided. The goal should be to strengthen the enterprises so that they learn to perform all tasks,

³ Hans Christiaan Haan et al., *Municipal solid waste management - Involving micro- and small enterprises: Guidelines for municipal managers*; ILO and others, ISBN 92-9049-365-8

including preparing tender bids, without external support. Any tendency for long-term dependence on the support agency should be resisted.

It is particularly useful if training and advisory support can have practical links to required tasks, such as the preparation of a financial report, the development and application of a performance indicator, or the implementation of a health and safety policy.

3.2.3 Relationships between partners

In any relationship, one partner may be stronger or have more influence than another and try to dominate. There can be resentment and envy. This can also be true in public-private partnerships. Two extremes of unequal relationships will be discussed, followed by other aspects drawn from the case studies.

- a) The local government partner dominates the service provider. This may occur in a city where there are small enterprises involved in waste collection. (Of course it is not inevitable that the situation that will be described should exist, but it is a danger that should be guarded against.) If the service provider is in a weak position, he⁴ may feel very insecure, not knowing how long the agreement will last, and he may feel that he has no rights, only obligations. He may also have very limited access to municipal decision-makers for discussion of problematic issues. Changes in conditions may be forced onto the service provider. There have been instances when a contractor or franchisee has been dismissed for no reason except that local government officials want to give the work to someone else.

There are two ways to correct this imbalance. One is to ensure that the contract or franchise agreement includes clauses that protect the rights of the service provider, and that the courts are prepared to uphold the law, even against the local government. Another way is for the service providers to join together into an association that is ready to negotiate with the local government, go to arbitration, or even take up a court case in favour of one of its members.

It is, in fact, in the interests of local government to have a reasonably balanced relationship, because this will encourage service providers to be confident about taking a longer-term view, and will encourage service providers to try to solve problems by discussion, instead of trying to hide them.

- b) It is also possible for the private sector partner to dominate the local government partner. This can occur in situations like that described in Paper 32, where there is a large and experienced multinational contractor working with a local government authority which has little experience of working with the private sector. In such a situation the contractor may add obscure clauses into the contract which are later used in the contractor's favour, or if the contract is vague, the contractor's legal department may be able to exploit this vagueness to the contractor's benefit. In such cases the local government may pay more than was anticipated or receive an inferior service, or the contractor may take up a monopolistic position (with no competition and with control of local information) so that there is no alternative than to continue with this contractor, against the wishes of the local government client. The risk of this situation occurring can be minimised by investing time and experience in the development of contracts, and, in some cases, by ensuring that the contractor is not allowed to take over every aspect and area. (For example, in Tanga, Tanzania, a private enterprise collects waste from one part of the town, and the local government workforce collects from the remainder. Annex 3.3.1)

A key factor in the relationship between local government and the service provider is the contract or the franchise agreement. The importance of a carefully prepared document cannot be overstated (except in cultures and countries where such legal documents have no binding authority, and it is

⁴ The male pronouns *he*, *him* and *his* are used here and elsewhere for simplicity, but there is no intention to confine these remarks to males; the masculine pronouns are used to represent both genders.

assumed that in such places there are other mechanisms for conducting business). The following comments are directed at situations where legal documents are taken seriously.

- It appears that many contracts and agreements are only about two pages long. Such short documents are sure to be insufficient for all but the simplest tasks. Whilst there is no value in length for its own sake, it can be expected that a well written waste collection contract would be in the region of 30 to 150 pages long. (Some guidance on contracts can be found in Sandra Cointreau's Guidance Pack, on the CD.) On the other hand, "pro-poor" procurement of municipal services "implies that the necessary procedures are accessible and understandable for all" (Toole et al., Paper 5), suggesting a short and simple agreement. She continues that it is important that "rights and obligations are well specified for the different actors" (including the local government partner), "and that social issues are carefully considered".
- The period of duration of a contract or agreement should be sufficient to allow amortisation of equipment that is needed to execute the contract in an effective way. If trucks are needed, the duration should be five to seven years so that loans can be repaid. Shorter terms are sometimes preferred because of the need to allow for inflation or terminate the services of an unsatisfactory enterprise, but both of these can be accommodated in a longer-term contract. A longer-term contract implies that the local government partner has medium- to long-term policies and will not be deflected from them by different approaches or proposals from donors or offers from multinationals. Small enterprises may have difficulty in obtaining loans to buy equipment, or may be forced to pay unusually high rates of interest. Official documentation from the municipality may help in obtaining credit from a bank. (A mature association of waste collection enterprises might also be able to act as guarantor for loans.)

Other problems may arise in the relationships, because of size or as a result of other factors:

- Some informal waste collection enterprises in Mexico wield considerable political power because of their links with a major political party. (Medina, Paper 17)
- Primary collection enterprises in Lusaka are concerned that they cannot register as waste carriers with the Environmental Council of Zambia because they cannot afford the registration fee. They fear that they might lose the right to operate. (Kabuba, Paper 14)
- Political representatives may resent the role of NGOs in solving people's problems (Gupta, Paper 12)
- In Tultitlan (part of Mexico City), it is not possible to get a licence to operate as a waste collector without the approval of one of the powerful but informal waste collection bosses. Demonstrations and even kidnapping were used to prevent informal waste collection activities being taken over by municipal operations. Collusion between politicians and groups of waste collectors has led to political violence and lower waste management standards. (Medina, Paper 17)
- Over time big (private) agencies develop all the negative qualities of a municipality and become too powerful to listen to supervisors. (Gupta, in his review of Paper 2)
- Large contractors believe more in stereotype solutions than innovations. (Gupta, in his review of Paper 2) However Rouse (Paper 41) also mentions how individual primary waste collectors are reluctant to consider any changes to their carts, even if there are good reasons for the changes. This suggests that resistance to change can be found anywhere.
- There is widespread support for decentralising waste collection to the lowest possible level. This trend is driven by unsatisfactory experiences with very large waste collection organisations, by the hope of avoiding corruption, by the benefits of involving community members in supervision, and by the attraction of providing work for unemployed people in their own locality. Often the attention is focused on primary collection, with little attention to downstream stages - secondary transport, treatment and disposal. For these stages larger organisations may be preferable, as will be discussed in Section 3.3.
- Many people are convinced that one of the main reasons for a preference for private sector participation is the opportunities that it provides for officials to receive bribes. Unsuccessful bidders may be quick to complain that contracts and franchises are given on the basis of class,

religion, ethnic or family preferences, and so it is therefore crucial to take all possible steps to make the awarding of contracts and franchises as open and objective as possible.

Workshop participants repeatedly emphasised the importance of the partnership between the municipality, the community and the waste collector as an essential requirement for sustainable waste collection services for the poor.

3.2.4 Monitoring and enforcement

In many ways, contributions at the workshop emphasised the importance of the institutional framework, monitoring and enforcement provided by local government. In the abstract for Paper 33, Post et al. wrote that the three cases they described "clearly demonstrate that better outcomes in terms of contributions to sustainable development largely depend on the determination and capacity of local governments to regulate and control private operators." This regulation and control is needed in three major areas – environmental protection, service standards and enforcing agreements.

a) Environmental aspects

Environmental aspects of waste collection are largely confined to preventing unloading of the waste at unauthorised locations, and burning of the waste. Rapid urban growth and resistance of the siting of waste disposal facilities have increased the distances that waste collectors must carry the waste. Because of the cost and time involved in taking waste to distant disposal sites, waste collectors are tempted to deposit their loads at closer locations. The introduction of disposal charges makes illegal dumping more attractive. Difficulties experienced by drivers at disposal sites, such as intimidation and theft by gangs of recyclers, and the risk of getting stuck when driving on the wastes (and the damage that may be caused when pushed out by a bulldozer) add further reasons why it is attractive to drivers to unload the waste clandestinely at a nearer and more convenient location. An alternative solution to the transport problem is practised in one part of Mexico where waste collectors burn waste at night within urban areas, after they have sorted through it looking for recyclable materials. (Medina, Paper 17)

Control of waste disposal is most difficult where the open competition system is in operation, because the municipal authorities have very little contact with the waste collection enterprises. For this reason waste collectors may be required to have a licence, which could be revoked if the operator is found to be breaking environmental regulations. In Mexico, attempts have been made to stop illegal dumping of waste, by requiring that all waste collectors be licensed. However, in such situations, not all collectors actually get a licence, and enforcement is poor. (Medina, Paper 17). In Nairobi (Papers 15 and 33), it appears that no licence is required. Even if a licence is revoked for an environmental offence, there is often the possibility for an operator to start trading again under a new name.

The franchise system allows more control of illegal dumping, but great vigilance is still necessary. In Dar es Salaam (Paper 71) a record is kept of all vehicles that come to the disposal site, including noting the area that they have come from. This allows some checking of disposal practices. In the contract system, payment can be conditional on the reception of wastes at the disposal site.

b) Service standards

City authorities should check that the operator is providing a service of good standard. This requires that the service to be provided is described in clear and quantitative terms in the contract or agreement, and that there are sanctions that can be applied if the service does not meet the prescribed standards. There is always the risk that the municipal authorities will pay little attention to low-income areas, so it is important to involve the community in supervising. If the waste collection labourers are drawn from the community where they work, they may feel a greater moral

obligation to discharge their duties in an acceptable way, for the benefit of their families and neighbours.

Two useful lessons can be drawn from the experience in Windhoek (Paper 13). Earlier contractual arrangements provided for payment according to the weight of waste collected, but this resulted in waste collectors adding heavy items to the waste to increase their income, without necessarily cleaning the areas where they were supposed to be working. Now they are paid according to the cleanliness of the area they are supposed to clean, and there are penalties for substandard performance. The City has also instituted a system of community volunteers who are each paid a small monthly amount to monitor the use of the container outside their home.

c) Upholding franchise conditions

One of the problems that some of the franchisees in Dar es Salaam struggle against is the collection of waste by unauthorised collectors, in breach of the franchise conditions that have granted them a monopoly in the particular area. These unofficial collectors may dump the waste they collect at an unauthorised place, so that the official franchisee is responsible for removing such piles and transporting them to the disposal site. Alternatively, the unauthorised collector may unload the waste at the official transfer site, but the franchisee is still responsible for loading that waste into the truck and transporting it to the disposal site, and for paying the disposal fee - and all this for no income. Because the unauthorised collectors do much less with the waste, they can afford to charge a lower fee. This is a major threat to the system in Dar es Salaam, and requires action from the Municipalities to stop it.

Another key issue, which will be discussed more in Section 3.7, is the payment of fees to the franchisees. Many franchisees are in financial difficulties because only a small proportion of the households that they serve, or are supposed to serve, actually pay the fee. They need support from the Municipalities, first to convince householders that the franchisees have an official status and that they are entitled to collect a fee, and secondly to enforce payment of the fee.

3.3 Links with downstream operations

Where does the waste go next?

This issue here is what happens to the waste when it has been delivered to a temporary storage or transfer point by the primary collection service. Who is responsible for transporting the waste to the disposal site? Who should pay for this transport and disposal? How is the waste to be transferred?

Problems with this interface have been mentioned in nearly all the case studies. If the waste is not removed regularly from such transfer points the accumulated waste may cause the collapse of the primary collection system and a loss of credibility for the organisation or individuals who set up the primary collection scheme. The problem is that many primary collection schemes are concerned only with getting the waste away from the houses, out of the immediate neighbourhood. They use handcarts or tricycles that are not suited to transporting the waste any distance; the operation of trucks is a completely different activity.

Various situations are described in the case studies. In Paper 14 (Lusaka) we read that community members lost confidence in and withdrew from the primary collection schemes because the waste was not collected by the city authorities. The proposed solution of the CBOs was to form an enterprise to provide transport services and apply for a loan to buy a truck. In Karachi it was necessary to pay the driver of the municipal truck a bonus on each visit to ensure that he came to remove the waste from the transfer point.

The situation is simpler if there is no need to organise a separate transport service. Informal waste collectors in Mexico who can take the waste directly to a disposal site earn the best incomes (Medina, Paper 17). In Delhi the city authorities were persuaded to provide some land for composting and recycling, so that only small quantities of residues need to be transported away (Gupta, Paper 12).

Experience in India suggests that the secondary transport of the waste to the disposal site should be provided by the organisation that collects waste from the houses (Agrawal, Paper 10). This is also the system that is used in Dar es Salaam. The franchisees that collect the waste are responsible for transporting it to the disposal site and for paying the disposal charge. This does not pose a particular problem for franchisees working in middle- and higher-income areas where it is possible to collect the waste in a truck and use the same truck to take the waste for disposal. It is more difficult for franchisees working in low-income areas because they collect waste with handcarts, so the waste must be transferred to a truck. The financial situation of most franchisees working in low-income areas is so marginal that it is often difficult for them to be able to pay for the hire of a truck, and truck owners do not like to hire out their vehicles for carrying waste because it corrodes the bodies of trucks faster than other materials, and there is considerable wear and tear on the trucks when they drive on the waste at the disposal site. In many cases the Municipalities have stepped in to help the franchisees by providing secondary transportation. Some franchisees are often not able to pay the disposal charges, and so are accumulating debts.

The most common method of transfer is to tip the waste out of the cart onto the ground, and then load it into baskets which are lifted up and emptied into the truck or trailer that will take the waste to the disposal site. This method is slow, and dust and sharp objects present health and safety hazards to the loaders. It requires trucks to wait for some time while they are loaded. Rouse's study of cart design highlights the importance of designing carts to facilitate transfer (Paper 41). In India, CDC has developed a tricycle that can unload directly into a container or a truck (Agrawal, Paper 10), and it will be interesting to see the costs and durability of this system. Scheu describes an efficient system of transfer from containers by means of a truck-mounted crane (Paper 42). A concept of transfer station that has been widely used in China has been used and improved by Coffey for use in dense urban areas, and this is described in Paper 40.



Double handling at transfer



3.4 Involving all stakeholders

It is important to take time to understand and address the perceptions and concerns of all stakeholders (Gupta).

“All stakeholders should be involved” is like a mantra or a slogan that was heard repeatedly during the workshop. This widespread conviction has come from many experiences in many situations. Solid waste collection requires participation from all waste generators to ensure that the waste is passed to the collectors at the right time and in the right form. The requirement to pay a direct charge adds another degree of commitment. Involvement of all stakeholders is necessary to generate and receive ideas, to create ownership and to inform. Paper 18 (Rahman) refers to the involvement of the community in identifying the type of container that would be acceptable to the community and that would not be stolen. The paper also describes the very effective neighbourhood committees that were set up to manage primary waste collection.

All stakeholders should be involved. But there are limits. Should the wider community be involved in detailed design of the handcarts that will serve them? (Certainly the labourers who will load, push and unload the carts should be involved, but the householders...?) What happens when key stakeholders do not want to be involved, as in some instances in the planning exercises reported by Olley et al. (Paper 51)? Whilst it might be useful to involve the private sector in the determination of the criteria by which tenders will be assessed, it would not be reasonable to involve all the bidders (who are indeed stakeholders) in the actual assessment of rival bids. Under some political regimes it may not be politically possible to consult the public in a formal or comprehensive way. Nevertheless stakeholder involvement remains a factor of great importance in the development of sustainable solutions for collecting ideas, learning about local conditions and requirements, and developing a sense of ownership.

Waste management is often quite high on the agenda in local politics. Referring to a particular situation, a workshop participant mentioned that workers of all political parties were taking an interest in primary collection initiatives. Association with only one party can lead to problems (especially if that party does not win the election) so it is important to involve all candidates and encourage them all to endorse and support primary collection initiatives for the poor.

3.5 Developing awareness

Various terms were used to refer to providing information to the general public - *awareness creation*, *public education*, *sensibilisation* and *sensitisation* being the main terms. It is assumed that they all mean approximately the same. A key point to remember is that all should be linked to achieving a change of behaviour, not just the receipt of information. The key changes in behaviour that are sought are the correct management of solid wastes - putting wastes into containers rather than littering, making wastes available to collection workers at the designated time and in the required way, and, in some cases, segregating wastes for separate collection. The other important change is to motivate householders to pay a fee for waste management services, when perhaps no direct charge has been payable before. This includes informing community members regarding the identity of the official waste collection agent, and to whom waste management charges should be paid.

In many cases it is not clear who is responsible for this task. It is reasonable to expect that the official municipal authority should introduce its agent and explain to the citizens that they should pay this agent, but often this is not done. In many cases the franchisee has been obliged to persuade the people whom he serves that it is official policy that the refuse collection charge should be paid to his staff. If this work is left to the franchisee he will, at the very least, need an official letter from the Municipality explaining his status as franchisee.

Raising awareness takes time and money. In Dar es Salaam, the people who go from house to house to collect the monthly refuse collection charge also spend considerable time informing and explaining to residents. A period of about a year was scheduled for an awareness building

programme in Delhi (Paper 12). The preparation of guidelines and a comprehensive awareness poster in South Africa took much longer than expected because of protracted but useful consultations (Paper 50).

A visit to a waste management scheme that was operating well was very useful in generating interest and understanding (Gupta, Paper 12). Ali (Paper 2) also cites an example in which interest in a collection scheme spread informally to neighbouring communities.

With some people, and in some situations, awareness alone is not enough. If people are being asked to do something they regard as inconvenient, or if expenditure is involved, there will usually also be the need for effective enforcement.

3.6 The financial sustainability of waste collection services for the poor

Quote: "Running solid waste collection on a commercial basis in poor areas in poor cities is simply not possible." Johan Post, during the discussion of his paper.

Quote: "For us it is more important to improve living conditions than to make a big profit." (Dar es Salaam franchisee leader)

An entrepreneur explained that he was not currently involved in waste collection because he was reluctant to fund the refuse collection business from his other business interests.

For any viable enterprise, apart from short-term problems, the income should be more than the outgoings. Many franchisees are struggling to be financially viable. They work hard to keep their costs low, sometimes working on a voluntary basis, paying low salaries and using simple equipment. There are three possible sources of income - fees from households that they are entitled to as franchised waste collectors, payments from the Municipality under contractual arrangements for street sweeping, drain cleaning etc. and income from the sale of plastic bottles, glass, and corrugated cardboard (carton). Some franchisees have not been offered a street sweeping contract, and some have stopped recycling because the income was so low. What can be done to improve the income from fees in the low-income neighbourhoods?

Some franchisees in Dar es Salaam claimed that less than 10% of the households in the areas assigned to them were paying the refuse collection charge. In other cases the percentage was nearer 50%. One entrepreneur stated that the break-even point comes when 25% of the households pay the required fee regularly. Whilst franchisees are supposed to collect waste from all households within their area, it is unlikely that this is possible in many cases. Unofficial waste collectors are operating in some areas, as discussed earlier in Section 3.2.4.

The administrative structure in Dar es Salaam (which divides the community into cells of ten households) should be well suited to motivating the payment of fees to the franchises. Some local leaders are helpful in encouraging payment and others are not.

Ceiling fee rates have been set by the Dar es Salaam authorities, for three classes of residential area and for businesses. Some franchisees have found it helpful to charge a small amount whenever a bag of waste is collected, and in proportion to the volume of waste handed over, rather than asking for a monthly payment. A similar practice has been effective in a low-income area of Abidjan (Cissé, Paper 19).

A common strategy for providing more income for services to poor customers is to cross-subsidise - using surplus income from prosperous areas to support operations among low-income residents. This has been done in Bangladesh (Paper 18) where collection areas include a range of income groups. (There was some initial difficulty in forming a joint neighbourhood committee for such areas, presumably because the rich did not wish to associate with the poor, but these difficulties have been overcome.) Some franchisees in Dar es Salaam have more than one income group in their areas. Whilst the monthly fee per household is TSh 2,000 in high-income areas, it is only TSh 500 in low-

income areas, yet it could be argued that the waste collection work in low-income areas is more difficult because of access problems. (A less frequent collection service is generally offered to the poor.) It is hardly surprising that the enterprises are keen to get franchises in high-income areas, whereas there is little competition for the franchises in low-income areas. One way of making the situation more equitable would be to ask franchisees in high-income areas to bid on the basis of the fee that they would pay to the Municipality; the Municipality could then use this income to support operations in low-income areas.

Agrawal (Paper 10) and Rahman (Paper 18) report that the level of service provided to the poor is different from the level of service in more prosperous areas; because of access problems and to save money. A lower fee in low-income areas is also justified because the poor generate less waste per capita.

These observations lead to the conclusion that, before proposing a system it is necessary to consult widely among the community to determine the type of service that they want and their willingness to pay. Such studies should be undertaken in a thorough and rigorous way. Care must be taken to present the questions in open way that does not suggest that a certain answer is expected, and to ensure that the right people answer the questions. Two mistakes are often made when willingness-to-pay studies are not undertaken or are not treated seriously. One is to assume that the poor are not willing to pay for anything but the most rudimentary service (when in fact they may be willing to pay a little extra for a more frequent or more convenient collection). The other mistake is to assume that they will pay for a conventional service when, in fact, they will prefer to pay less for a less convenient service. A useful presentation on the subject has been prepared by Altaf (1996)⁵

It might be assumed that the rich are more ready to pay a waste collection fee than the poor. This is not always the case. Extensive experience in India has brought one presenter (Agarwal, Paper 10) to the conclusion that "revenue collection from poor communities is easier and smoother than in affluent areas".

Whilst it would be expected that politicians would support the provision of waste collections services, there were accounts of politicians - just before elections - telling people not to pay their fees.

In Dar es Salaam there are mechanisms for enforcing payment, first at ward level and then in the courts. These processes are slow and so are ignored by many of the franchisees. Some enterprises concentrate on collecting fees from commercial premises, but others mentioned that it was very difficult to get shopkeepers to pay. Perhaps there are ways of mobilising social pressure to encourage payment of fees, such as by collecting fees from groups of houses together, but if only a small minority are paying these fees it is difficult to see how social pressure could be developed.

In spite of these discouraging observations, it is worth remembering that waste collection services among some of the poor residents of Dar es Salaam have been continuing for some time, and the reports from the Indian subcontinent indicate that waste collection services to the poor can be sustainable.

A question remains regarding community-based enterprises in which members do considerable work on a voluntary basis. Can an organisation that depends on voluntary work be regarded as sustainable? In the absence of start-up capital, a small community-based enterprise may need to rely on voluntary inputs from members for the first few months of operation, but if members are working without pay after a year it is likely that they may need to look for paying employment elsewhere. "It also must be a profit-generating work" (Gupta in review of Paper 2). Cissé (Paper 19) reported that in Abidjan, where a community-based enterprise had failed, a lone entrepreneur has succeeded, even paying a daily charge to the community for the rental of his cart.

⁵ Altaf, Mir Anjam and J R Deshazo, 1996; *Household demand for improved solid waste management: A case study of Gujranwala, Pakistan*; in World Development, Vol 24, No. 5, pp 857 to 868; 0305-750X(96)00006-X

3.7 Equipment and facilities

Technology must be integrated with all the other aspects (social, health, environment, legal, institutional, financial etc.) of solid waste management. Whilst it has too often been assumed that technology alone can solve problems, and this had led to failures and major wastage of money, the pendulum sometimes swings too far the other way, and technology issues are ignored, with the result that unsuitable equipment is used – carts that are too small or too heavy or difficult to use, transfer stations that are wasteful and a major nuisance, or trucks that are very inefficient.

Two surprising facts that came out of a study about handcarts (Rouse, Paper 41) were that a university engineering department was unable to develop an acceptable design of handcart, and that many handcart users are reluctant to accept any changes to the design of cart that they are familiar with. All three papers in this section emphasise that there is no unique technological solution that will be successful everywhere; designs must be based on local data. It is important to pay particular attention to the density of the waste that must be collected, since this has a marked impact on the design of truck that is suitable (Paper 42), and since it may vary (even in one place) throughout the year (Coffey, Paper 40). All three papers illustrated and emphasised the value in improving on what already exists - neither discarding current designs nor copying them unquestioningly.

There was only one recorded mention during the workshop of bulky and heavy waste (such as foliage and construction waste) that is often discarded with normal domestic waste, but for which normal collection practices may not be suited. Accumulations of such waste can attract other waste and spoil an otherwise clean environment, and so provisions should be made for removing such material.

3.8 Gender Aspects

In Dar es Salaam, women have played a major role in setting up and running initiatives for collecting solid waste. Women have also successfully taken on tasks previously done only by men, including pushing carts and loading trucks. In contrast, vehicles that are pedalled rather than pushed may be considered unsuitable for women to operate in some cultures (Rouse, Paper 41). Women have been found to be more trustworthy and more effective than men in fee collection, exhibiting a patient perseverance that gets results.

3.9 Key points

The importance of partnership between (or an integrated approach involving) the municipality, the community and the waste collector was repeatedly stressed. Other stakeholders also must be involved in matters that concern them.

Many workshop participants suggested that waste collection schemes in poor areas (that depend only on the fee income from the particular area) are not sustainable, and that cross-subsidy is essential. The problem of collecting fees is certainly a major challenge which requires a greater degree of public awareness. Who is responsible for generating that increased awareness?

There was clear agreement that local government has an essential role to play, even where all services are provided by the private sector. There must be enforcement of environmental regulations, especially regarding burning and unauthorised dumping. Franchisees need official support in fee collection and in protection of their right of exclusive collection in their designated areas. Pro-poor initiatives and incentives are needed to ensure that the poor also receive a service.

4 Outcomes of the workshop

What has the workshop achieved?

The most important outcomes of a good workshop - broader and deeper knowledge, larger networks and strengthened friendships, and enhanced motivation and confidence - are difficult to measure and assess a short time after a workshop. It is hoped that this workshop has and will produce such outcomes. The following paragraphs list some more obvious outcomes from the workshop.

The District Commissioner for Kinondoni, Mr Athuman Mdoe, and Raphael Ndunguru, representing the City Director of Dar es Salaam, attended the closing session of the workshop, at which the SWOT analysis was presented. A copy (similar to Annex 4) was given to them. They showed interest and appreciation for the analysis, and asked for it to be translated into Kiswahili so that it could be used for an internal workshop on the following Monday.

There were three senior representatives of the Institute of Waste Management of Southern Africa at the workshop, and the City and Municipal waste management officials of Dar es Salaam and other cities expressed a real interest in the starting of a Tanzanian Chapter. They expressed their hope to send several delegates to next International Congress (to be organised by the Botswanan Chapter in June 2003 in Francistown). This type of professional association can have many positive impacts

After the group discussion of Paper 31, it became evident that the whole issue of waste pickers and the informal sector is important. The impacts of the current trends of globalisation and privatisation are likely to be much greater for them than for other groups of urban poor. Participants from three continents (Laila Iskandar, Martin Medina and Mansoor Ali) agreed to pool their efforts to write some evidence-based advocacy material. Their first step is to gather information from the available literature.

It is hoped that this report, with all the information on the CD, will form a useful resource for developing sustainable pro-poor initiatives in solid waste collection. The papers that were made available on the internet have already been used by research and postgraduate students.

One participant, who has considerable experience in writing and publishing, is considering developing a longer publication on the basis of the case studies.

It is intended to prepare a short publication for municipal officials and NGOs - perhaps based on the findings mentioned in Chapter 3. It is hoped that a complementary PowerPoint presentation can also be developed and used.

A research proposal for studying CBOs is being jointly developed.



Some outcomes are difficult to measure

5 The future of the CWG

Based on discussions from the first plenary session, the working group developed a document outlining proposals for the future development of the CWG. This document is reproduced in full in Annex 7. Some key points are mentioned here.

The mission of the CWG was defined as to achieve fundamental changes in the approach to urban solid waste management in low- and middle- income countries, through knowledge sharing, capacity building and policy advocacy.

It was agreed that the CWG should promote awareness of the linkages of solid waste management with poverty reduction, sustainable urban development, improved public health, improved urban governance, sustainable consumption and production, combating climate change and protecting biodiversity. Attention should also be focussed on the role of improved solid waste management in the achieving of Millennium Development Goals, and CWG outputs should lay stress on the needs of the urban poor.

Whilst being interlinked with programmes on the international agenda, the CWG should also be demand-driven, taking guidance and direction from its many members in the South.

Previously the CWG has largely been operational only in the preparation, conducting and reporting of workshops, but there was a clear consensus that the CWG should grow into other activities, including advocacy, networking, capacity building, and the development of new knowledge products. Multi-donor support will be sought for the funding of a central secretariat and activity modules.

Priority areas that were identified for development in the near future included

- Pro-poor public-private partnerships
- Capacity building for municipalities, particularly relating to private sector involvement;
- Awareness raising
- Cost recovery, assessment of willingness-to-pay etc.;
- Participation and consultation in the context of good governance, and
- Sustainable production and consumption.



Much has been achieved, but more remains to be done

ANNEXES

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Annex 1 Participants

The numbers of participants varied through the week, depending on the sessions. There was a total of 72 residential participants and a maximum of 26 day participants, 17 of whom were franchisees who were mainly involved on the Tuesday and Wednesday. Contact information for these participants is provided in Annex A1.1. Photographs of some of the participants are presented in Annex A1.2.

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A1.2 Faces and wishes of some participants

As part of the introductions process, participants were asked to fill in a questionnaire, giving a few details about themselves, attaching a photograph, and also answering the question:

If you had one wish that would come true or one prayer that would be answered in connection with solid waste management, what would it be?

Answers to this question, and, in most cases, the photographs that were provided (not all participants provided one) are shown below.

Wishes and prayers

To have a zero garbage situation and decent work in SWM.

Local solutions improved, livelihoods saved, appropriate technology upgraded in solid waste management sector

To create one thousand jobs in one year

Proper solid waste management that reduces health impacts (diseases).

Increased potential for solid waste management in poverty alleviation in the community.

Let solid waste management alleviate poverty in the poor communities.

The approach for the elimination of solid waste management.

To see a community aware of solid waste as a source of income.

Participation of the public in solid waste management.

How can the effective recycling of plastic bags be achieved?

The Government of Tanzania should take seriously and give priority to the issue of SWM in the country, not only for environmental and health purpose, but also for improving the status of the poor households, as a source of income.

I am expecting to get experience after this workshop and utilising it in managing solid waste in my ward.

Good quality human resources in the sector.

Adequate refuse trucks or transport, effective frequency of collection and to improve on capacity building and partnership with private refuse service providers.

Wishes and prayers

A policy on SWM with effective and efficient implementation benefiting citizens and informal sector working in this area.

Municipalities may become enlightened to understand the ground realities of the sector and are able to address them on the basis of the people's choices and aspirations.

My wife and children understand and accept my important message on recycling, and practise it.

We could concentrate on strategies and policy issues related to the promotion of national, large, private sector involvement in SWM, and develop the necessary tools such as capacity building, funding, guarantees etc.

That more than 85% of the city residents had access to solid waste management services.

That solid waste management should be well connected to the overarching goals such as poverty reduction and environment, the Millennium Development Goals, WEHAB themes and other internationally agreed policy frameworks and goals.

Involvement of local leaders at grassroots level

Having sufficient human resources and adequate equipment to deal with solid waste management by the end of 2003

That all solid waste in Zambia and other developing countries be stored, collected, recycled and disposed of in an effective, efficient and cost effective manner to benefit the poor and make our cities and countries the cleanest in the world.

Strengthening the CWG as an important promoter of sustainable SWM with particular emphasis on environmental and social (poverty/gender) aspects

I wish that we would learn from our mistakes so that the same failures and errors are not repeated again and again.

I wish that international consultants and local engineers would understand that the waste characteristics vary greatly between different countries and how waste vehicles and equipment from the industrialised countries are totally inappropriate for developing countries.

I wish that people became aware that they are just "compost in clothes" and part of the system.

Create conditions for binless cities



Vivek Agrawal



Noman Ahmed



Mansoor Ali



Abdurahman Almoassib



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Silke Drescher



Sanjay Gupta

Wishes and prayers

Municipalities of Maputo and Matola, please base your decisions regarding waste management on technical and economic expertise.

More dedication of decision-makers in sustainable urban development with special regard to solid waste management and environmental health in poor suburban areas.

That the link between the increase in standard of living and the increase in waste generation would be broken.

A clean environment for all.

Solid waste management is a priority for all and that Zambia has the cleanest cities in the world.

That solid waste management is more integrated, going beyond collection and disposal to recovery, reuse and recycling of both inorganic as well as organic waste materials.

Public-private partnerships should be given a priority

Appropriate healthcare waste management is in place in healthcare establishments.

That more people know how to make money from waste.

I wish the promotion of IWM as the majority are going to benefit.

That all people feel responsible for the mess they create and act accordingly; that donors, equipment suppliers and other experts would dare to get away from end-of-pipe solutions to engage in an integrated, sustainable approach; that no product would be allowed on the market before its sustainability has been proven (re-usable, recyclable, repairable, safely disposable etc.)

That every person would take responsibility for their own waste.

That this important fact of our collective lives gets the attention and receives the funding that it merits.

Sponsorship for presenting paper at Philadelphia conference

The poor in urban areas are adequately served.

Upgrading of existing open dumpsites so that they meet basic requirements for landfilling in Zimbabwe.



Gereon Hunger



Orlando Jalane



Anders Peter Jensen



Sap Joubert



Ireen Kabuba



Anne Karanja



Seif Kasalama



Noor M Kazi



Modibo Kéita



Cecilia Kinuthia-Njenga



Moshi Kinyogoli



Arnold van de Klundert



June Lombard



Ray Lombard



Thomas Lyimo



Ole Lyse



B B K Majani



M. Masocha

Wishes and prayers

That communities contribute towards the sustainability of waste collection and management for better health and life of the urban poor.

I wish that the involvement of the private sector in SWM could be one of the solutions to poverty reduction in urban areas.

That politicians would understand that solid waste management is a politically "sexy" issue which, if carried out successfully, can even win votes.

For municipalities and communities to form lasting partnerships to efficiently tackle the environmental and health issues associated with poor waste management.

That those who are earning a living from waste will receive the recognition and respect that is due to them.

That waste management will be recognised as one of the basic factors in poverty reduction.

A clean urban and rural world in which all stakeholders are involved and benefit from the system.

That people will stop considering that their own waste is someone else's problem.

To realise waste reduction all over the world by affecting consumption patterns, recycling and composting.

I pray for the establishment of an African Solid Waste Association, which will be:

- a source of practical solutions to African solid waste management problems,
- a resource centre for the promotion and dissemination of best practices for SWM and related information on livelihoods and traditional waste recovery practices,
- a research and training centre which bridges the gap between Africa and other parts of the world.

That everyone in the world – rich, poor or middle class, businesses or individuals – would learn to see the waste that they make, take responsibility for it, and make conscious and responsible choices about what to do about it.

Consideration of local situation and experience rather than simple transfer of strategies and technology from industrialised countries

That the Department of Urban Services would have the ability and capacity to properly plan and carry out waste collection without recurring equipment problems and without a dependency on donor funds.

That solid waste collection and management should become an community affair, especially among the urban poor: waste should become wealth.

To draw the attention of every individual and partner to make SWM their routine job, as it is highly linked with the way we live and it is not a matter of priority, rather it is a natural phenomenon.

That all people collect, treat and separate their solid waste as they would like the others to do it.



Mwanaidi Msosa



Ramadhani Muhsin



Christian Nels



Jane Olley



Johan Post



Lise Praestegaard



Gabriela Prunier



Jonathan Rouse



Wa'el Safi



Tadesse Sahilu



Anne Scheinberg



Manfred Scheu



Felix Socre



S B Taiwo



Abebaw Tadesse



Berthold Volberg

That consulting services in the area of waste management will be more appreciated as more than just the provision of monetary funds.

To see that SWM gets the priority it deserves at the city, national and international levels.

Efficient and sustainable system of solid waste management in place

A sustainable solid waste management service through community involvement and participation.

Full recovery and zero waste, and the attitude, lifestyle and economic framework to achieve this.



Caroline Werner



David C Wilson



Maritim Wilson



Charles M Zulu



Chris Zurbrugg

Some photos from the site visits



Annex 2 Abstracts of papers

The abstracts of workshop papers are presented here. The full papers can be downloaded from the CD. (Readers who are not able to access the papers on the CD may request the Skat Foundation to send copies by e-mail, and, in special cases, printed versions of a limited number of papers could be sent by the postal service. To receive papers in either way please contact Adrian Coad by e-mail at Adrian.coad@skat.ch or by post at Skat Foundation, Vadianstrasse 42, CH – 9000 St Gallen, Switzerland.)

The numbering of the papers is not consecutive, but indicates a system of grouping of the papers:

Numbers 1 to 9 indicate keynote and introductory papers

Numbers 10 to 29 indicate case study papers

Numbers 30 to 39 indicate papers on private sector participation

Numbers 40 to 49 indicate papers on equipment, facilities and design

Numbers 50 to 59 indicate papers on other institutional aspects

Numbers 60 to 69 indicate papers that were presented as posters.

Numbers 70 on indicate supplementary papers that were not presented but which are loaded onto the CD. These papers have not been edited. Their abstracts can be found in Section A2.4.

Two papers that were accepted for the workshop but were not actually presented are included in Section A2.3.

The PowerPoint presentations of some of the papers and brief reports of the discussions that followed each paper are also on the CD, and can be accessed by clicking on the links at the end of each paper. Some of the papers were reviewed and comments of the reviewers can be accessed by links following the particular papers.

A2.1 Papers presented in the plenary sessions

2. Community-based Enterprises: Constraints to Scaling up and Sustainability

by Mansoor Ali

Waste collection can be beneficial to the urban poor in a number of ways. The urban poor can provide the service as a means of income generation or benefit from the service in terms of a cleaner local environment and improved health. In many cities of low-income countries, local authorities intend to improve waste collection services but they do not have a clear strategy to ensure that the benefits of any improvement reach the poor. As a result, either low-income areas receive no service or the urban poor do not benefit from the service in terms of employment or income generation. However, many enterprising individuals in low-income urban areas provide waste collection services to middle-income and commercial areas in order to generate an income in an informal way. Community groups also initiate waste collection activities and so generate an income. Many donors support the promotion of microenterprises to provide solid waste management services to low-income groups (UMP, 1996). This paper reviews lessons on the various aspects of enterprise promotion, drawn from a study of more than 250 community enterprises in Dhaka and Lusaka. The paper illustrates the benefit to the poor as recipients of services (as in Lusaka) and as service providers (as in Dhaka). The data and information used in this paper have been collected during two research projects: *Promoting micro-enterprises for primary collection*, and *Sustaining livelihoods*

through community based solid waste collection, both of which were funded by the Department for International Development (DFID), UK.

4. Structuring solid waste collection services to promote poverty eradication in Dar es Salaam - the ILO experience

by Alodia W. Ishengoma

Solid waste collection in Dar es Salaam City is structured as a public-private partnership, and is a community-based and demand-driven activity. The collection and recycling of waste is a source of livelihood income for thousands of people.

Solid waste collection services in Dar es Salaam city have been franchised out since late 1998 by the Dar es Salaam City Authorities to the private sector, which comprises companies, NGOs and CBOs, including women's groups. They provide waste collection services in partnership with the Municipal Authorities.

This paper describes the arrangements for involving the private sector that have evolved in Dar es Salaam over the last ten years, including the capacity-building inputs of the International Labour Organisation. It also presents the results and impacts that have been achieved and suggests areas where further improvements are needed.

(6 pages)

5. Social aspects of partnerships

by Kelley Toole, Wilma van Esch and Kees van der Ree

Involving community-based and other small-scale enterprises in waste collection can increase both service and income benefits for the poor. Public-private partnerships provide a framework for organizing and agreeing such delivery systems. Partnerships in municipal solid waste collection involve multiple relationships – between local authorities, elected leaders, collecting enterprises, waste collection workers and waste pickers, households and local businesses. These partnerships can be formalized through appropriate contracting procedures. Pro-poor contracting implies that these procedures are accessible and understandable for all, that rights and obligations are well specified for the different actors, and that social issues are carefully considered. This approach helps ensure that job creation, social protection and adequate representation of the poor can be outcomes of waste collection partnerships to protect the urban environment.

(8 pages)

10. From two thousand to two million - The evolution of a community-based primary collection model in India

by Vivek S Agrawal

This paper describes the implementation of lessons learned from the experience of developing a primary collection system that was initially serving two thousand people in Jaipur, but now reaches two million in different cities. The approach – or *model* – has developed with time, and so have the tools. The reasons for a lack of success in two locations are discussed, and the constraints to such systems are also reviewed.

The poor have benefited in a number of ways from the improvements described here. Though not all the areas that are covered by this system are poor, there are many poor communities which now have a reliable waste collection service as a result of the initiatives described here. Jobs have been created and the working conditions and productivity of recycling workers have been improved.

(9 pages)

11. Community managed primary waste collection in two squatter settlements in Karachi

by Noman Ahmed

Low-income communities residing in squatter settlements are usually obliged to develop their own services through self-help efforts. This often applies to solid waste management. The aim of such a service is to take mainly household wastes to a point outside the locality from where it can be removed by municipal authorities. This minimalist system ensures cleanliness and basic upkeep in the area. The ingredients of this system include a waste collection worker, basic waste collection equipment such as a wheel barrow, hand tools, and perhaps collection bins to be provided to the households. However, without proper project planning and community mobilization, these efforts to set up a primary collection service may not produce the desired results.

In two low-income communities in Karachi, this approach was applied by a local NGO - Association for Protection of the Environment (APE). After providing continuing professional support with the objective of acting as a catalyst, the NGO also trained a few members of the local community-based organization (CBO) to manage and run the project on an independent basis. This paper provides the account of the approach and the system that evolved from it. It presents the lessons learnt from the process of empowering the communities to develop their own service systems in the absence of municipal assistance. It raises issues that are vital in ensuring the sustainability of such attempts in lower-income urban localities.

(11 pages)

12. Partnership For Change: Bringing stakeholders together to manage solid waste in a low-income community in Delhi

by Sanjay K. Gupta

The paper describes how a system of waste collection and utilisation was set up in a low-income area of Delhi where the Municipal Corporation was not providing an adequate service. It describes a partnership between a community, a municipal administration and two NGOs. Instead of depending on outside agencies for removal and disposal of the waste that is collected, this project set up its own source segregation and composting scheme, so that only a small residue is left for disposal by the municipal authorities. The experiences of this project emphasise the time needed to set up such a scheme, both for developing the necessary attitude and behaviour changes in the community and for obtaining the necessary support from the municipal authorities. The ideas, anxieties and proposed solutions of the various stakeholders are described. The paper also highlights the benefits of partnership with a local organisation as such links help to make the work simpler to operate and save time in building trust.

(10 pages)

13. Windhoek's waste management strategy for informal settlement areas

by Abraham Pierre (Sap) Joubert

This paper describes changes that have been made in the arrangements for collection of solid waste in Windhoek, the capital city of Namibia. The previous system used one-man contractors organised on a city-wide basis to collect open space litter, and they were paid on the basis of the number of black bags they collected. This system led to the illegal collection of waste that was part of the formal bin system, in order to increase income, and left streets and open areas in an untidy state. Supervisors were overstretched and therefore ineffective.

The new system, which was introduced in 2002, is organised into 15 wards and payments to contractors are based on achieving an acceptable standard of cleanliness in streets and open spaces.

Penalties are deducted from payments to contractors if the contractors fail to meet required standards. In addition to this system Community waste control Volunteers are appointed and paid to supervise the use of containers and prevent dumping on open ground.

A system of classifying housing areas according to economic level and quantities of waste generated per household is introduced and some of the implications for waste collection are reviewed.

(10 pages)

14. Helping microenterprises to work with low-income communities in Lusaka

by Ireen S. Kabuba

Lusaka is faced with environmental problems, which include water and air pollution, insufficient water resources, ineffective solid waste management, underdeveloped waterborne sanitation systems, traffic congestion, open quarrying and limited urban planning capacities. Over the years, low-income settlements have grown and new ones have emerged, presenting a development dilemma to the civic authority, the Lusaka City Council (LCC). The Council does not have the capacity to generate enough resources to meet the challenges presented to it by competing demands for infrastructure and services.

Lusaka City Council (LCC) has embarked on a number of interventions to alleviate some of these problems. These include servicing high-density areas where solid waste management and water supply were critical needs. Currently solid waste management in Lusaka has high priority.

With consultations with the residents in three settlements, solid waste management is being implemented through the establishment of community-based enterprises (CBEs). The CBEs are responsible for managing the solid waste system in a business-like manner.

However, there have been aspects that have hindered the development of CBEs. These include:-

- No secondary transport to remove waste from the settlement, so clients are lost;
- This has led to some CBE members leaving because their organisations are not making profits.
- Politicians at local level who are preoccupied with maintaining their political power base and influence tend to disturb the operations of the CBEs
- Absence of an official policy on CBEs within the Ministry of Local Government (MLGH). This allows the LCC to change its focus regarding the CBEs.

Despite the difficulties the enterprises are facing, most members have continued to operate and create awareness within their communities. The CBEs need support from outside to enable them to continue operating, especially in capacity building to help them to operate their businesses.

(9 pages)

15. Informal privatisation of garbage collection and disposal services in Nairobi: - socio-economic contributions

by Anne M. Karanja

The involvement of the private sector in providing solid waste collection services to residential areas, institutions and commercial enterprises is one of the most noticeable developments in Nairobi's SWM arrangements. This has been prompted both by rising demand for waste collection services and also the need for employment. However, privatisation in waste collection in the city falls primarily under the unregulated open competition mode. This paper looks at this mode of privatisation, and the way its activities are organised, including capacity for services and the extent to which it contributes to employment.

The potential for the private sector to improve the collection and transportation of solid waste, as well as service coverage - especially in the city's low-income areas - is demonstrated. However, the paper also shows that 'informal' privatisation of garbage collection services results in uneconomic servicing. The most outstanding hindrance to this potential is the inappropriateness of the policy framework, especially its failure to provide for the regulation, control and supervision of the private sector, and to facilitate the sectors' efficiency objectives. Private collection and disposal companies in Nairobi operate in isolation, without any significant assistance or co-operation from the local authority. There are no refuse collection standards issued by the council to regulate the operations of the private companies engaged in garbage collection and disposal. The business is operated purely on a willing-buyer-willing-seller basis, with inhabitants in any residential area not obliged to join the service being provided in the area (unorganised markets).

The sector has consequently not contributed as much to sustainable development - especially employment - as it would have were it backed by more comprehensive regulation. An effective legal framework would enable local government to adopt a more integrated solid waste management system, formally incorporating the private sector.

(11 pages)

16. Improving the stakeholder involvement in solid waste collection in Bamako

by Modibo Kéita

This paper describes how the waste collection system in Bamako (Mali) has been improved during the last 15 years. The process is still continuing. The paper focuses on the experiences of CEK (a consultancy) and its partners in certain communes of Bamako. After introducing the current context of waste collection in Bamako, the changes that have been introduced are described, with particular reference to cultural aspects, especially the opportunities for developing opportunities for discussion, sharing of opinions and perspectives, and participatory decision-making. Achievements are reviewed, some of the problems that have been encountered are described, and short-term prospects are discussed.

This paper introduces the concept of the "municipal platform" as it has been implemented in parts of Bamako. Involving municipal officials, service providers and householders, a municipal platform allows stakeholders to share ideas and concerns, and encourages them to co-ordinate their efforts. Services can be modified to suit local needs, and national legal requirements can be integrated with local laws. Participation is seen to be a vital requirement for sustainability.

(9 pages)

17. Serving the Unserved: Informal Refuse Collection in Mexican Cities

by Martin Medina

Waste collection in most Mexican cities is insufficient: no more than 75% of the total MSW generated is collected. Low-income communities are most often the areas that lack refuse collection. Informal refuse collectors serve communities that lack municipal service. The paper analyzes recent experience in several Mexican cities regarding population served, patterns of operation, public policy towards informal collectors, and the social, economic, and environmental impact of this activity. The paper argues that informal refuse collection creates jobs, benefits the economy and can help clean up the urban environment.

(10 pages)

18. Incorporating slum dwellers in solid waste collection programmes in Bangladesh

by Shaikh Ferdausur Rahman

This paper reviews the approach of an indigenous NGO, Prodipan, to the provision of primary solid waste collection services in two urban areas of Bangladesh. In a socio-economically mixed housing area, collection routes were designed to include both rich and poor areas. There was initial resistance by the more prosperous residents to sit down and discuss with their low-income counterparts, but that resistance has largely been overcome and now there is a residents' *Waste Management Committee* for each collection route. Door-to-door collection was found to be not feasible in slum areas because of access problems, so a system of shared bins was developed, and a way was found to overcome the problem of theft. Low-income households were charged a lower fee.

The experiences of a slum area are explained from the viewpoint of a waste collector. Faced with the challenge of collecting sufficient fees to pay his wages and cover all costs, he first left the job, and then returned to it because of the extra income he could earn from making and selling compost.

The paper emphasizes the involvement of the residents in decision-making and design, the importance attached to serving poor areas, and the need to ensure financial sustainability.

(5 pages)

30 A comparison of three waste collection systems appropriate to formalising communities in southern Africa

by Ray Lombard and Mamosa McPherson

Three waste management service provision projects are examined in this paper. The projects all share the same basic objectives associated with the provision of acceptable, appropriate and affordable waste management services to disadvantaged communities. The projects varied considerably in scope from the very large eThekweni Metro Projects supported by cross-subsidies derived from that Metro's substantial rates base through the Khayelitsha Project, which is smaller but similarly funded, the Thokhoza Project – which depends on Reconstruction and Development Project funding provided by central government – and finishing with the Swaziland Project where an attempt has been made in a pilot project to fund a small-scale labour-intensive operation from service fees recovered from the beneficiaries of the service.

A number of critical success factors are common where the systems have been effective:-

- Transparency
- Legitimacy
- Engagement of the community in decision-making
- Public information
- Careful selection and training of staff
- Political support
- Authority interest and support
- Effective fee recovery systems
- Reasonable contract periods

Those projects that depend entirely on community-based funding and that lack the above success factors will struggle to be sustainable in Southern Africa.

Main paper 22 pages

Table summary 5 pages

31. Integrating Local Community-based Waste Management into International Contracting

by Laila Iskandar

Greater Cairo has a waste collection system that is not found outside Egypt. Three thousand tons of household waste have been collected each day by waste collectors and recyclers working in the informal sector and known as zabbaleen. The waste that is collected and then recycled supports an estimated 40,000 people in Cairo alone. These people have developed recycling systems that are estimated to reuse around 80% of the waste that they collect. All this is done with no payment from the City government.

The City authorities have required the zabbaleen communities to move to more peripheral locations, and have required them to use motor vehicles in place of their traditional donkey carts. Both changes have been traumatic for these communities, but they have adapted and survived. Now they are faced with an even greater challenge or threat – all solid waste management in the major cities is to be undertaken under contract by large international waste management contractors. What does the future hold for the zabbaleen?

This paper looks at the challenges facing the zabbaleen. Clearly there are social, economic and environmental reasons why they should continue to be involved in solid waste management, but there are many issues to resolve. How can a large number of independent groups negotiate in a unified way with one large contractor or with the top levels of city government? How can the contractors be persuaded to develop a new method of operating that includes the zabbaleen? How can the supply of recyclable materials be maintained when mixed waste is compacted into large trucks?

(7 pages)

32. Robbing Peter to pay Paul: The taboo effects of landfill privatisation on waste collection

by Anne Scheinberg and Victoria Rudin

This paper looks at the taboo dynamics of solid waste collection in cities in the South, and discusses the way that modernisation and privatisation of landfills can actually threaten refuse collection in poor and marginal communities. These threats come in the form of the take-over of collection and the formation of collection monopolies by large national or international private companies in search of high profits. These companies usually enter a community by proposing a contract or concession to privatise a sanitary landfill. It is usually not clear to the local authority that the firms may be even more interested in collection, so they do not usually pay much attention to parts of the contract that make this possible.

Public-private partnerships for development of sanitary landfills have gotten a lot of attention in recent years. But although many local authorities are looking for a private firm to take over their landfill, they do not often understand or discuss the long-term risks to their city's waste collection. They are generally unaware of the fact that such contracts may weaken or destroy the local MSE and CBO sector, even when local stakeholder platforms work together with international organisations like WASTE or ACEPESA to strengthen them, improve their contracts, and help them find financing to improve their equipment. That is because the dynamics of these partnerships are quite difficult to discover from only one experience. And maybe it is also because neither the city officials who want the private firm to enter, nor the private firms themselves, like the idea that these things are too clear or well-understood.

This paper breaks the taboos by presenting some economic, commercial and institutional aspects of the relationship between the private operation of landfills (and other final treatment or disposal

facilities including composting facilities and incinerators), and the weakening or disappearing of the local waste collection companies which are serving central urban areas, but are also working together with the community sector to provide waste collection services to poor and marginal areas.

(15 pages)

33. Planned versus spontaneous privatisation - assessing performances of public and private modes of solid waste collection in Accra, Nairobi and Hyderabad

by Johan Post, Moses Ikiara and Nelson Obirih-Opareh

This paper takes a closer look at new private or public-private arrangements in solid waste collection in Accra, Nairobi and Hyderabad. The type of service arrangements that have materialized are quite distinct, reflecting the prevailing socio-political circumstances in the three cities/countries. The processes may be labelled *haphazard* privatisation in Accra, *spontaneous* privatisation in Nairobi, and *controlled* privatisation in Hyderabad. An attempt is made to assess the performances of various modes of solid waste collection using a 'sustainable development' template tailored to this specific sector. It seeks to combine conventional concerns for service efficiency and effectiveness with broader social and environmental concerns. A major conclusion is that privatisation has several advantages, notably wider coverage, and improved reliability and quality of services. At the same time the three cases clearly demonstrate that better outcomes in terms of contributions to sustainable development largely depend on the determination and capacity of local governments to regulate and control private operators.

(10 pages)

40. Innovative Small Transfer Station provides a role for the urban poor in refuse collection

by Manus Coffey

This paper, which is based on a concept pioneered in China, shows how innovations in the design of equipment and facilities can lead not only to greater operational efficiency, but also to the creation of livelihoods for the urban poor and the improvement of working conditions.

Some of the most frequently mentioned problems affecting community-based primary waste collection schemes are related to the transfer of waste to the trucks that take it to the disposal site. This transfer can be particularly problematic in very densely settled urban areas. The environmental nuisance caused by transfer operations generates opposition from residents and shopkeepers. The concept described in this paper offers a proven solution to these problems.

This paper looks at social, financial and technical issues. It shows how local waste collection microenterprises can be set up to work with this transfer system. It proposes improvements to the original concept and shows how to calculate the cost savings that can be expected. Examples are given of implementation of small transfer stations in Egypt and Vietnam.

(15 pages)

41. Waste carts: Issues for poor waste collectors

by Jonathan Rouse

Small, simple, non-motorised waste carts such as wheelbarrows, handcarts and tricycle carts are a valuable livelihood asset to poor waste collectors, and play a vital role in waste management in many low-income countries. They enable collectors to transport more waste, faster, further and with greater ease and safety. In many cases, however, these vehicles are inappropriately designed and managed, giving rise to difficulty, danger and unnecessary expense to users.

This paper begins by describing why waste carts are important and to whom, and emphasises the importance of putting these people at the centre of design and provision processes. Ultimately, many of the problems faced by users with their vehicles (e.g. discomfort, poor bearings and corrosion) are technical. This paper outlines a number of such problems, but seeks to show the reader how often their solution lies not in an engineer's workshop, but in the social norms, institutions and organisational priorities that dictate how the vehicles are designed, managed, maintained and used. It is also intended to show that many such problems could be easily and cheaply overcome.

Fieldwork undertaken with waste collectors in five middle- and low-income countries in Asia and Africa during 2001 provides the basis for this paper.

(10 pages)

42. Tailor-made collection system for high-density waste in Gaza

by Manfred Scheu

This paper describes the process of designing and developing a waste collection system. It illustrates major influences on good design – such as the density of the waste, access to dense housing and town centres, maintenance capabilities, productivity and building on existing experience – but also reminds the reader of the importance of details. Containers were designed to be easy to load, and the vehicles were designed so that they could be used flexibly to collect from different areas and using different methods. The system was based on arrangements that were already in use, but which could be considerably developed and improved.

The importance of first building and testing one prototype is explained and demonstrated.

Operational experience has shown that the design that was developed is both more efficient and more reliable than compactor trucks in the particular situation.

Availability of spare parts and maintenance capacity was an important factor in selecting the chassis on which the bodies were constructed. The truck bodies and containers were built locally, resulting in a number of economic and technical advantages.

Though the paper describes a specific case, it presents criteria and considerations that should be applied whenever a collection system is being established or improved.

(9 pages)

50. Capacity building for waste collection in low income areas: developing user-friendly guidelines for municipalities

by June Lombard

This paper discusses the development of a user-friendly guideline for use by municipalities in general waste collection in high-density and unserved areas, and a public information and awareness-raising tool to accompany the guideline. The preparation of this document was an initiative of the Department of Environmental Affairs and Tourism (DEAT) in South Africa to assist in the implementation of its National Waste Management Strategy.

The terms of reference for the general waste collection guideline were to review existing documentation, consult with relevant stakeholders and conduct workshops to get input into the development of the guideline. The guideline was to include information on how to run community awareness campaigns, how to conduct service needs/willingness-to-pay surveys, what alternative area-specific collection systems are appropriate, and how to select, implement and monitor waste collection systems.

The public information and awareness-raising tool was to be suitable for municipal officials to use when consulting communities on the selection and implementation of appropriate waste management systems. It was agreed that this tool would be a generic poster illustrating all the functional elements of integrated waste management systems with facilitator notes on the reverse side.

This paper describes how the challenges of a limited budget and protracted delays were met to produce a resource that would guide municipalities to select and establish appropriate waste collection systems in densely settled areas where access and affordability were key factors.

(11 pages)

51 Building stakeholder capacity for Integrated Sustainable Waste Management planning

by Jane Olley, Anne Scheinberg, David Wilson and Adam Read

This paper uses some of the findings of an action research project to show some ways in which a multi-stakeholder approach to Integrated and Sustainable Waste Management planning can enrich the results and prepare for successful implementation. It discusses the application of the participatory planning methodology as laid out in the *Strategic Planning Guide for Municipal Solid Waste Management* in three cities, in India, Mali and Honduras. Using examples from waste collection planning in each city, it focuses on how local authorities can be engaged in ensuring that the urban poor are *adequately represented* and *empowered to participate actively* in the planning process. This differs from the traditional planning focus, which seeks to ensure that the poor are *adequately served*.

(13 pages)

A2.2 Papers presented as posters

60. Solid waste collection that benefits the poor in Zimbabwe: the case of the widows' group of Bindura

by M. Masocha

The paper examines the waste recycling scheme operated by a group of widows in Bindura, northern Zimbabwe. Most of the widows lost their husbands as a result of HIV/AIDS. The focus is on the economic benefits they derive from recycling and on the constraints they face. Information was collected by means of a survey involving active members of the widows' group, Bindura Municipal Council Officials, representatives from the private sectors and NGOs, and ordinary residents. In addition, a focus group discussion was held with the group recently. The study established that, on average, each member gets Z\$7500 (US\$ 140) per month, mainly from selling collected cardboard to recycling companies. Whilst this income is below the official poverty line, it does represent a very important source of income to the families headed by these widows. The group has diversified its operations and has established fairly strong linkages with private and public sector stakeholders as well as with NGOs like *Environment Africa*. The major problems confronting the group include shortage of adequate equipment and the delay in the processing of payments by the group's clients.

(7 pages)

61. Cost Reduction and Service Improvement of Solid Waste Management by Establishing Joint Cooperation Councils

by Markus Luecke and Wa'el Safi

This paper reviews experience from the establishment of the first Solid Waste Management Council (SWMC) – an autonomous commercialised public body or utility – for the Governorates of Khan Younis and Deir El Balah (to be referred to as the “Middle Area”) in the Gaza Strip of the Palestinian Territories. (A paper was presented on this topic at the CWG Manila workshop in 2002 – paper4-2). As a result of the success and the positive experience gained by the SWMC of the Middle Area, the Northern Governorate of the Gaza Strip intends to establish a similar cooperation to strengthen its services. A technical baseline study was conducted by a local consultant; the study contains a detailed investigation of the existing solid waste management system in the Northern Governorate and proposes the necessary technical steps for the establishment of a Council similar to the existing one.

This paper summarises the findings of this study in order to compare the performance of the existing SWMC of the Middle Area with that of the three municipalities (Jabalia, Beit Lahia and Beit Hanoun) in the Northern Governorate.

The objective of this paper is to show the comparative advantages of joint SWMCs over individual municipal systems by comparing the performances of the three Municipalities in the Northern Area with the performance of the SWMC of the Middle Area. Comparisons between the Northern Area and the Middle Area, considering of both technical and financial aspects, are presented.

62 Sweepers of the Indian Sub-Continent

by Mansoor Ali

The objectives of this poster paper are as follows:

- To highlight the role of the poor in waste collection and to demonstrate that how they could be affected by changes in waste systems.
- To discuss in depth various poverty dimensions of the workers involved in waste collection.
- To propose ideas concerning how the poor could benefit from improved solid waste collection through promoting waste enterprises owned by employees.

(3 pages)

A2.3 Papers submitted but not presented

1. Solid Waste Management in Africa: - a WHO / AFRO perspective

by Hawa Senkoro

This paper provides an overview of the conditions in which low-income households in Africa are living, with a particular focus on the problems that are related to solid waste collection. Several fundamental causes of these conditions are suggested. Solid waste management is clearly a priority concern of poor urban communities. Any strategy for improving the situation should be built around greater public awareness and widespread application of existing knowledge. The outline strategy that is proposed is illustrated by a successful initiative in Benin. The paper concludes by stressing the importance of effective decentralisation, listening to the wishes of the community, and NGO support.

(5 pages)

19. From community-based organisation to low-income private contract for solid waste collection in a poor settlement

by Dr Guéladio Cissé

The private sector option for waste collection in poor settlements has good chances for sustainability, but generating incomes on the basis of contributions from poor households entails many risks. This case study is illustrative of the difficulties inherent in ensuring the sustainability of waste management services provided by community-based organisations in poor settlements, where conventional waste collection vehicles cannot enter and where every resident is fighting for the survival of his own family. The community-based organisation model, which has recently been widely recommended for solid waste management, has revealed its limitations in Yaosehi, a precarious peri-urban habitat in Abidjan. The leaders of the community have given a contract to a low-income operator; this innovation is gathering some interesting results and shows many signs that this is one way of achieving sustainability.

(5 pages)

A2.4 Other related papers

70 Co-operation and conflict in the transition to sustainable development: alliances in urban solid waste management

by I.S.A. Baud, S. Grafakos, J. Post

Research on urban solid waste management (SWM) in developing countries has developed from the concern over increasing complexity and costs of waste management for local authorities, as well as the concern over patterns of resource recovery and recycling in reducing the environmental impacts of growing waste flows. These two concerns come together in recent discussions on forms of partnerships, or alliances, seen as key instruments in improving urban governance. These have emerged notably in local environmental planning. This paper examines the extent to which patterns of co-operation or conflicts of interest emerge in alliances around urban solid waste management, and how they affect goals put forward from both research perspectives.

The cases of public-private, private-private, and community-private alliances, examined in the paper, indicate that certain alliances have priority for local authorities, affecting the extent to which SWM contributes to sustainable development indicators. Although private-private and private-community arrangements generate positive outcomes on resource recovery, reduction of waste flows and employment gains, these contributions are insufficiently recognised and valued. This means that they cannot fully realize their potential contributions, and that the unrecognised nature of their activities makes them vulnerable to repression and harassment. In alliances in which authorities work with other actors in SWM there is a bias towards large-scale enterprises, mainly for collection, transportation and disposal. Although this may lead to improvements in efficiency and effectiveness, there is a large area of conflict of interests in achieving ecological goals as such companies are not interested in waste separation and resource recovery. A second area of conflict lies in the closure of markets for small-scale operators to carry out such material recovery, as their access becomes more restricted under such alliances.

(17 pages)

71 Public-Private Partnership in Solid Waste Management: - The Case of Temeke Municipal Council

by Thomas Lyimo

Temeke is one of the three Municipalities in Dar es Salaam; the author of this paper is the Head of Solid Waste Management of Temeke Municipality. The paper describes the waste collection arrangements in the Municipality in terms of a three-way partnership – Municipality, enterprises and residents - and looks at various aspects from these three perspectives.

72 Solid Waste Management and Health

by Velma Grover

It is always important to have a clear understanding of our goals – what we are trying to achieve. It has always been a fundamental objective of solid waste management to reduce the negative health and environmental impacts of solid waste. In deciding how to manage waste it is more important to develop practices that minimise the negative impacts than to copy practices that have been developed elsewhere for different situations. It is important to go back to first principles. This paper provides a useful review of most of the threats to health and the environment posed by solid wastes, and it is recommended as a regular “refresher course” for all who are involved in solid waste management, whatever their discipline or involvement. It could also contribute to the formation of a useful basis for a training course on health and environmental impacts of waste.

(10 pages)

73 Primary collection by a women’s group in low-income areas of Ouagadougou

by Léocadie BOUDA

This paper was written in French, and has been translated into English. It describes the primary collection scheme that was set up in a low-income area by an association of women, with the assistance of CREPA. Initially boys were also involved, but they were soon ejected from the group. The service described has been in operation since 1993, but the number of subscribers remains limited and regular payment of fees continues to be a problem.

(10 pages, in French; 8 pages in English)

74 Sustainable participatory solid waste collection that benefits the urban poor: - Case study of Ibadan, Nigeria

by Sunday Boladale Taiwo

This extensive paper reviews the situation of solid waste management in Nigeria, especially in Ibadan, with particular attention to institutional arrangements and public attitudes. It describes efforts and programmes that have been undertaken to improve the situation, in particular the Sustainable Ibadan Project and the Urban Basic Services Programme, supported by UNICEF. It links these efforts with the Rio Declaration.

(25 pages)

75 Public participation in solid waste management – a Thai Experience

by Velma Grover

This paper describes the impact of public involvement in the formulation of plans for solid waste management. Two different communities in one town in Thailand arrived at different solutions for reducing the waste to go to the new disposal site. One community opted for a waste bank, and the other for kerbside collection of source-segregated waste.

(4 pages)

Annex 3 Summaries of working group findings on the franchise system in Dar es Salaam

The workshop participants were divided into five groups and three franchisees joined each group, first to discuss with them and answer questions about their work and situation, and then to take them on a site visit to see the areas where they are working and the methods that they are using.

A3.1 Group A: Considering franchisees in which women play the major role

Report prepared by M Masocha

A3.1.1 CLN Electrical and General Pvt Ltd

a) *Background*

- Started in 1998 by a group of 20 members (15 women and 5 men)
- Initially involved in cooking and selling food
- Interest in solid waste collection started when three children in the neighbourhood were knocked down by cars while they were carrying waste.
- In 1999 the franchisee won a one-year renewable contact.

b) *Current activities*

- Involved in (i) waste collection, (ii) street sweeping, (iii) cutting grass and (iv) cleaning stormwater drains.
- Area served include Makangila (unplanned low-income settlement) and Lubondelumpanga.
- There are approximately 3500 household units in the area.
- The enterprise serves only 312 households – the rest depend on informal and illegal waste collectors who charge less but dump their waste illegally.
- The street is 6.2km long.
- The Municipality pays the franchisee TSh 1,150 for each of the activities (ii, iii and iv) performed per kilometre stretch of the street.
- Inspectors from the Municipality award marks (range from 0-10) for every activity carried out. Inspections are carried out every day.
- The group pays the Municipality TSh 7,000 for every load of solid waste delivered to the dump. Each load or trip is normally 7 tonnes. Charges are calculated on the basis of number of trips made.

c) *Waste collection*

- Households bring their waste to the truck (taka-taka system).
- An employee of the franchisee moves around with a loudspeaker telling residents to bring their household waste.
- The area is divided into two sections for collection purposes and each section receives waste collection once per week.
- The households pay a collection fee depending on the volume of solid waste they put out.
- The collection fees are: TSh 100 (US\$ 0.10) for a 20 litre bucket of solid waste, TSh 250 for a 50 kg sack full of solid waste, and TSh 300 for a 100 kg sack full of solid waste.

- Payments are made at the time when the waste is brought. The franchisee does not issue receipts since they feel this slows the process. However, a survey has been done and the franchisee is aware of the average amount of money it takes per day.
- On average it takes a household member 5 minutes to bring the waste.
- Those who operate businesses (such as shops) pay a monthly collection fee of TSh 2,000, as set by the municipality.

d) Challenges

- Some sections of the area are not accessible even by push-carts.
- Illegal dumping, which is quite widespread. Some illegal dumpers have been caught and reported to the municipality for prosecution, but this has tended to be a slow process. The area is unplanned and this makes it difficult to monitor.
- No measures have been put in place so far for dealing with free-riders and these are often responsible for illegal dumping and burning of solid waste.
- The franchisee faces unfair competition from informal waste collectors who charge low collection fees (TSh 50), which erodes the group's revenue base.
- Some shops and business people refuse to pay for the collection service offered and simply ignore invoices. They just refuse to open their gates when the franchisee comes to give them an invoice.

A3.1.2 KJ Enterprises

a) Description of activities

- Started operating in 1999 - won a one-year renewable contract.
- Covers a street that is 4km long.
- Contracted to do the following tasks: (i) waste collection, (ii) street sweeping, (iii) cutting grass and (iv) cleaning storm water drains. Activities (ii, iii and iv) are limited to the main road only.
- The Municipality pays the franchisee TSh 1,150 for each of the activities (ii, iii and iv) performed, per kilometre stretch of the street.
- Inspectors from the Municipality award marks (range from 0-10) for every activity carried out.
- Serves a predominantly middle-income area in Kinondoni municipality
- Employs 6 waste collectors/sweepers and 2 drivers
- Two drivers get TSh 40,000 (US\$ 40) each every month, while collectors get TSh 1,500 (US\$ 1.50) each per day
- The franchisee owns a tipper truck and a tractor.
- Area has 300 housing units but currently only 250 are paying for waste collection.
- 50 households pay TSh 1,000 (US\$1) per household per month while the other 200 pay TSh 2,000 per household per month. Seventy out of the 200 households are flats where employees of a bank live. The commercial bank pays their collection fees every month.
- The remaining 130 households get monthly invoices and make individual payments.

b) Challenges

- Franchisee started with 400 households but the number has shrunk to 250.
- Non-payment of collection fees.
- Municipality takes a long time to prosecute defaulters and illegal dumpers.

A3.1.3 SWAMECOS

a) *General description*

- Started operating in 1998.
- Franchisee comprises 5 women.
- Employs 6 casual workers who are hired on a daily basis.
- Serves Kijitonyama area.
- Area has a street that is 3km long.
- Contracted to do the following tasks (i) waste collection, (ii) street sweeping, (iii) cutting grass and (iv) cleaning stormwater drains
- Area has 100 households – 30 belong to the low-income category while 70 belong to the middle-income category
- Each household pays a collection fee of TSh 300 per collection.
- Collection is usually two times per week.

b) *Major challenges*

- High transport costs due to the fact that the area is far away from the disposal site.
- High disposal fees
- Ensuring that all households who benefit from the service pay for it.
- Small number of transfer stations.
- Lack of protective clothing for the workers.
- Poor infrastructure – roads are impassable during the rainy season – this forces the franchisee to suspend service, and causes a high rate of wear and tear of vehicles
- Short contract period.

A3.2 Group B: Including franchisees' association and disposal site recycling

Report prepared by Ray Lombard

A3.2.1 First Meeting: 10 March 2003

Meeting with Mr A S Mwakilembe of KEPIA who is also the Chairman of the Dar es Salaam Waste Management Association (DAWAMA) – the other two franchisees were not present.

DAWAMA Chairman: Mr A S Mwakilembe
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Privatisation was initiated in January 1999 and he had to apply to the City Council to qualify.

The contracts were let out to CBOs, NGOs, companies and individuals. The contracts involved the door-to-door collection of refuse from households, industry and commerce in the ward areas allocated. The franchisees were responsible for collecting the service fees according to schedules of fees set by the City Council. The Council had set service standards.

The franchisees had to inform their new customers that they were obliged to pay for the refuse collection service. In his opinion enterprises needed to have at least three months of operating capital reserves in order to be able to survive the period until the public was sufficiently sensitised to

begin paying for the services. The enterprises were paid as contractors by the Council for the street sweeping and open space refuse clearing that they carried out as part of their contract and this helped some of them to survive, because the beneficiaries of the refuse collection service were not paying the service fees. People were not sufficiently aware of their responsibility to pay for the service even after three months. Quite a few franchisee businesses had failed for this reason.

In 2002 the City of Dar es Salaam reorganised itself into three municipal areas – Temeke, Ilala and Kinondoni. Kinondoni and Temeke let out 12 month contracts, which were too short, whereas Ilala Municipality lets out 36 month contracts, which are better.

There are new by-laws that allow for the prosecution of service fee defaulters by the franchisees, but this imposes a time-related and financial burden on the enterprises, which is difficult for them to bear.

Mr Mwakilembe believes that his collection business will break even when he collects about 25% of the service fees from his clients. He provided a copy of the business feasibility study that he had carried out and this was tested using break-even analysis as a viability tool. It appears that he is quite correct in his assessment. However, he has not been operating the present contract because the fee collection is much lower than the 25% he believes is necessary. In fact it is less than 10% and he is, quite correctly, reluctant to fund the refuse collection business from his other business interests.

Another problem that he experiences is competition from non-franchised collectors who undercut the fee schedule set by the Council. He has no way of stopping this and receives no support from the Municipality to deal with this problem.

His first refuse collection contract employed 22 primary collectors using handcarts to collect refuse from the clients. These people carted the refuse to refuse bunkers, which are generally located at street corners in the service area. A driver and 3 helpers in the truck then serviced each refuse bunker. The loaded truck then transports the refuse to the nearest municipal disposal site where a fee is charged for the disposal of the collected waste.

Due to the above difficulties, he and a number of the other franchisees have formed the Dar es Salaam Waste Management Association (DAWAMA), in order to strengthen their negotiating position with the Municipalities.

A3.2.2 Second Meeting: 11 March 2003

Attended by Mr Mwakilembe, Mr J R Abbas who operates in Temeke, and Mr Amimu who operates a recycling business from the Temeke disposal site.

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Director	Fax: +266 22 2120326
Harmah Traders & Co	Mobile: +255 744 282836
P O Box 40690	E-mail: abby2001other@yahoo.com
Temeke, Dar es Salaam	

No address details were obtained from Mr Amimu

Mr Abbas expressed similar sentiments to those expressed by Mr Mwakilembe but he was still operating his waste collection service (750 paying out of 7,800). However, he felt that his business was losing money because clients could not pay the full fee set by the Council. He turns over approximately TSh 2,500,000 per month and his costs run at TSh 3,500,000 per month. He stated that Temeke is a poor area. He also funds the waste collection business from his other business interests – he operates a long-distance transport business and a building contracting enterprise. Mr Abbas started refuse collection contracting in 2002. His operation runs 7 days a week.

He also has problems with a lack of support from the local authority in helping to inform the people that they need to pay for these services.

Mr Amimu talked about the state of recycling in Dar es Salaam. He operated from the Temeke disposal site where he paid a number of salvagers. Glass was sold to KIOO Ltd – the local glass bottle manufacturer and plastic was sold to Cotex Ltd. Buyers came to him to buy material. Prices for recycled materials were poor, e.g. he obtained TSh 20 (US\$ 0.02) per kg for glass whilst he paid salvagers Tsh 10 per kg. However, the deposits on Coca-Cola and beer bottles helped to improve his cash flow.

He stated that there were 300 salvagers operating on the Temeke Site and about 20 buyers like him were based at the site. The market for recycled material was not well established in Dar es Salaam.

A3.2.3 Third Meeting and Site Visit: 12 March 2003

For the field visit, these three operators accompanied Group B to their areas of operation. Mr Abbas' offices in Temeke were visited and his operation witnessed. It was immediately apparent that he ran a well-organised set-up. He has offices, keeps accurate records of his clients and issues receipts against payment. He has a revenue collector who spends her time persuading people to pay for the services that he provides and, in so doing, raises awareness.

Some unnecessary double (or treble) handling takes place at the bunkers. The handcarts loads are tipped onto the soil before being loaded into woven baskets, which are lifted and tipped into the refuse bunkers only to be reloaded into baskets for loading into the refuse truck, which transports the waste to the Temeke disposal site.

Mr Amimu's operation was visited at the Temeke disposal site. Here cans of all descriptions were being recovered. Plastic bottles (the caps being separated because they are polypropylene whereas the bottles are either PVC or PET), plastic film, LDPE and HDPE were being collected. Cardboard (Kraft paper or carton) and glass were also collected. An interesting recycling activity involved the recovery of coconut shells that are resold for the production of charcoal. He indicated that he was struggling in his business because recycling is not a thriving industry in Dar es Salaam. Sometimes materials that he had recovered were exported to Kenya.

A3.3 Group C: With enterprises that have originated and developed in very different ways

Report prepared by Silke Drescher

A3.3.1 Experiences of the group members regarding franchisees

One group member was a private contractor in the town of Tanga, Tanzania (Andrew M. Kimonga, Kimonga Investments Ltd.). After undertaking a study on the potentials and costs of solid waste collection he set up a private business and presented his ideas to the municipality of Tanga. They agreed on a contract for refuse collection. Now he provides a service to half of the town while the municipality serves the other part. He wishes to learn more about how to deal with households which refuse to pay their fees.

A3.3.2 First meeting with Mrs. Msosa – the head of Kiwodet CBO in Kinondoni Municipality

Mrs. Msosa started in 1998 with some women from her community. They had to start with nothing but were able to raise about TSh 100 (US\$ 0.10) from each household which allowed them to buy plastic bags in which the waste was collected.

Now the CBO employs several men and boys who are responsible for the carts and the sorting at the transfer point. They started recycling on the spot (some of the households already separate the waste) or at the transfer station. They also started composting which seems to be a good business but the Municipality did not give an appropriate space to set up the operation (the plot was too far outside the city).

Now they are able to save some money with the two businesses they have:

- Waste Collection – under a franchise agreement, paid by the residents
- Street Sweeping – under a contract, paid by the municipality.

Currently they are able to rent a truck which takes the waste to the disposal site. They are planning to buy their own truck as soon as they have the money in their bank account.

Questions:

Did you start the CBO as your own initiative or was it initiated by the offer of the Municipal-SWM Programme?

It was the initiative of local women in order to generate income. When the Municipality started tendering the areas for franchisees we did not know about it. It was a local leader who told us about the programme and recommended us to apply for the franchise. There were two other competitors which wanted to take over the solid waste collection in that area but finally we got the franchise as we had the experience and the residents were satisfied with our service.

Who is paying for the work and how do you collect the money?

The money is collected monthly from the households, but some unreliable households have to pay on daily basis as they are not able to save the money during a month. The CBO is entitled on basis of the by-laws to collect the fees and if one does not pay we can take him to court.

The fees depend on the income of the household.

Is there a formal agreement between the franchisee and the customer?

There is no formal agreement but the CBO is supported by the regulations and by-laws of the Municipality. This message was conveyed to the households also with the help of the Municipality. We charge individual households and not houses with tenants as the tenants are changing quite often and the CBO is afraid that the landlord would keep the money.

The basic awareness building was done by the CBO by means of door-to-door mobilisation and meetings with local leaders. The "soft-skills" were provided by ILO and the municipalities – they used community meetings, dramas etc.

Do you have to pay tax or other fees to the municipality?

The CBO is supposed to pay a fee for final disposal of the waste (TSh 4000 [US\$4] per trip) but we do not pay very often as our income is too low.

Municipality: CBOs have to write an annual report in which they state their performance, income and expenses. This is still not done in a regular way.

How often do you pay the disposal charge and where do you dump the waste if you cannot pay the disposal fee?

We got a big bill from the municipality but we are not able to pay it. The municipality continues to take the waste from the transfer station to the disposal site.

How did you manage to keep the group together?

The initiative was a women's self-help group and we decide together. We share every profit we get and have also started to invest our profits.

Are you aware that your expenses are higher than your income from collection fees?

Kinondoni Municipality is supporting us by taking the waste from the full transfer station if we cannot hire a truck. For us it is more important to improve living conditions that to make a big profit.

Remark of the Head of Solid Waste Management of Kinondoni Municipality (Mr Kizito)

The Municipality accepts that the CBOs are not able to have a complete record of income from waste collection charges, even though they are obliged to provide an annual report. The Municipality knows that they still struggle with low fee collection rates and are hardly profitable.

A3.3.3 Meeting with three Franchisees

Question	Franchisee, and name of representative		
	Mkitu (CBO), Mr. Mtengereka	Kiwodet (CBO), Mrs Msosa	Kems (CBO), Mr Chris Kamulaga
<i>When did you start your business?</i>	2002	1998	1999
<i>Which area do you serve?</i>	500 out of 1300 in our sector of Kinondoni Municipality	Kinondoni Municipality	Kinondoni Municipality, next to Kiwodet
<i>How many members and workers do you have?</i>	21 permanent members	48 members (including workers)	56 members (including 6 employees)
<i>How is the collection organised?</i>	We meet at 8 a.m. every morning to divide the tasks among the members (the chairman taking the lead), rotating system between cart driver, collectors and loaders, the money is collected monthly.	Meeting at 8 a.m. members/workers have fixed jobs to do (street sweeping, collection, sorting, etc.) The fee collection is done only by members of the group, meeting in the evening to pay daily wages and the cashier takes the collected money.	Daily collection of waste in commercial areas. We see ourselves as a commercial service for garbage collection. Some members are only responsible for fee collection.
<i>How often do you collect the waste per week?</i>	Some daily, low-income areas 1-2 times a week, according to demand	Some places daily (restaurants, hotels), low-income area 1-2 times a week	Daily collection in hotels and restaurants, domestic waste 3 times a week (depending on the load of container).
<i>Is the fee fixed in the contract?</i>	There are recommendations in the byelaws, but prior to fee setting there was a discussion with the community. They are not able to pay the amount., currently the fee is half the recommended rate but it is still set by a formal agreement.	In some areas fees are fixed as agreed upon, in some they vary due to changing customers.	The rates are according to the rates in the byelaws.

Question	Franchisee		
	Mkitu (CBO)	Kiwodet (CBO)	Kems (CBO)
<i>What happens if people do not pay?</i>	They have to go to the community committee and they try to negotiate 30% do not pay	First we try negotiation, then we take them to the ward secretary, finally to the court. 40% do not pay.	Negotiation, penalties, court 40% do not pay
<i>What are the tricks to persuade them to pay?</i>	As above	We try to convince them politely: "Curing the disease is more expensive than the collection rate", "See the money is going into something that directly benefits you, not just a tax which goes to the municipality"	As above
	By law they are obliged to collect the waste – that means they also have to pick up the waste from households that do not pay.		
<i>How is the service controlled?</i>	The households have a card which is signed by the collector when he picks up the waste and counter signed by the resident.		
<i>What kind of waste do people throw away?</i>	All kinds but few recyclables in the area as it is a low-income area. We got ILO training on waste separation and recycling and we do it at the transfer station (plastic, aluminium, glass, paper)	All kinds of waste; we recycle glass, metal, paper but currently the revenues are low and storage place limited, so sometimes we have to throw away the stored material.	We stopped recycling as the effort is much higher than the revenue gained from it.
<i>Is organic waste used for animals or composting?</i>	There is no space for animals in the poor areas, but we want to start composting. There are empty plots but it is still too expensive to acquire them.	Some feed their vegetable and food remains to their own animals but they do not take the organic waste from dustbins. Some take market waste to feed animals.	
<i>Does the waste contain faeces?</i>	There is no space to put garbage outside of the houses, therefore they do not put faeces in the garbage bins.	Most people have toilets but still some use "flying toilets" and they end up in the waste bin.	It cannot be avoided but it does not seem to be a big problem
<i>How does the technical system work?</i>	Each household has its own container. Wheel barrows (carts) go along the narrow roads on the scheduled day of service, they take the waste to the transfer station and fill the trailers. The trailers are transferred to Mtoni disposal site by the Municipality (free of charge, as the CBO cannot afford it).	Daily service is done with push carts. People put the waste outside their homes. The workers empty the containers and take the push carts to the transfer station. After free assistance in the beginning, the municipality started to charge them for final disposal – but we cannot pay every time (see Section A3.3.2). In low-income areas the CBO takes a truck or trailer to a designated point and the households bring their waste and empty it directly into the truck which goes directly to the disposal site.	As for Kiwodet, refuse collection with push carts. In addition we own one truck and hire 2 tractors with trailers. 60% of the garbage goes directly to the disposal site – transported by the CBO. 40 % is taken to the disposal site by the municipality (for which the Municipality charges us).

Question	Franchisee		
	Mkitu (CBO)	Kiwodet (CBO)	Kems (CBO)
<i>What are your general problems?</i>	<p>People used to throw the waste anywhere and they are not used to a collection service.</p> <p>He serves only 500 out of 1300 households as the others are not willing to participate. There is a need for sensitisation.</p>	<p>The awareness has to be raised. The people, politicians, administrations and collectors have to cooperate.</p> <p>Awareness and cooperation is necessary for the CBOs to recover their costs, earn an income and do additional investment for improving working conditions.</p> <p>During elections, it is not possible to force people to pay, as politicians interfere.</p>	<p>People's awareness and willingness to pay has to be raised.</p>
Field visit	<p>The equipment (1 trailer, wheel barrows, shovels, gloves, rubber boots, brooms etc.) was provided by CARE International.</p> <p>The area is very clean, which is very visible on the borders of the sector. On the other side of a little stream (the border) there are huge waste piles!). The households put their waste outside their houses in old bins which are emptied by the workers. Close to the road on an open area (right in front of a food shop) there is the "transfer point" where some recycling takes place. The recycling activities are not very intense, as there is a lack of market.</p> <p>Furthermore, they have no space to store the separated items. It just stays at the transfer station.</p> <p>The Municipality picks up the full trailers (there are two: 1 municipal trailer and 1 from CARE International) at no charge and returns them afterwards.</p>	<p>CBO Kiwodet and CBO Kems use the same transfer station as they are in neighbouring sectors. They have two chambers where they put the waste from the house-to-house collection. In low-income areas they park the trailer in the area and ask the residents to load their waste directly into the trailer. During the night time, some households which do not want to pay the CBOs throw their waste into the trailer (or beside it).</p> <p>During a visit to the inner part of the housing area it is obvious which households participate in the collection scheme. In front of some houses the waste is piled up in a corner.</p> <p>Emptying the transfer station is very time-consuming and unsafe as it is done manually by municipal workers with baskets and without any protective gear. The municipal trucks have to wait for at least 20 min. There was only 1 trailer – normally the transfer station is served by trucks.</p>	
<p>The management of transfer stations and secondary collection is crucial for effective and efficient waste management and there is still considerable potential for improvement.</p>			

A3.4. Group D: Large franchisees

Report prepared by June Lombard

A3.4.1 Introduction

Larger waste collection franchises in Dar es Salaam (Tanzania) are awarded on the basis of the capacity of the tenderer in terms of vehicles and equipment, experience and the financial standing of the business, not on price. The tendering company must have a business licence to operate (costing

TSh 280,000 [US \$ 280] per year) issued by the municipality. Franchisees are also required to pay a tipping fee at the disposal site for each load.

There are two types of tender:

1. For a three-year franchise for collecting and transporting waste from urban areas to the waste disposal site and recovering the service fees directly from the user of the service (householder or business).
2. For three-month contracts for street cleaning and verge cutting, with transport of waste to the disposal site. Payment for this service is received from the municipality.

There is a set procedure followed in adjudicating tender and awarding contracts in accordance with the Procurement Act:

- Tenders for collection franchises for particular areas are advertised in the newspaper.
- The price is set by the tariff in the bylaws.
- Tenderers bid for the contracts they want. Contract areas relate to municipal wards.
- Municipal Councillors open the tenders and send the relevant names to the respective Ward Committees made up of 5 to 10 Street Committee leaders, chaired by the local Councillor.
- On the basis of tenderer's resources, experience and financial capacity, the Ward Committee selects a preferred bidder.
- Tenders are returned via the Municipal Waste Department to the Council and the chosen tenderer has to be approved by the Municipal Board.
- The franchise is awarded.

Performance indicators include:

1. Disposal site records of number of trips to site
2. Inspection of cleanliness of the contractor's area
3. Complaints received from recipients of the service.

The franchisees may subcontract part of the waste collection work. They may also subcontract the collection of service fees.

There is a procedure to follow in the case of defaulters (who refuse to pay the refuse collection charge): first negotiation through the Ward Committee structure, failing which court action may be taken. The latter is time-consuming and not very effective, so contractors usually do not follow this route. They attempt to recover their costs from the commercial sector and tend to overlook householders who do not pay. They nevertheless continue to provide a service to the defaulters.

A3.4.2 Summary of three franchisees interviewed:

	Name of representative and company		
	Raza Chandoo, Multinet Africa Ltd	Israel L M Lwagarula, Budege Service Co. Ltd	Hussan Khan, M P Environment Co. Ltd
Area covered	3 Wards, 6 – 8 km radius Street cleaning contract also	3 Wards Street cleaning contract also	2 Wards; area 2 x 28 km ² Street cleaning contract also
Number of households/ people	> 1000, 6 – 8 flats per house, 4 people per family	High income area, 1800 residences	Middle class (high income) area; 9000 residents
No. of businesses	800	450	400 mixed commercial

	Name of company		
	Multinet Africa Ltd	Budege Service Co. Ltd	M P Environment Co. Ltd
No of vehicles:			
Compactors	0	0	2
4 t & 7.5 t trucks	7	6	8
Trailers	11	2	9
Carts	23	10	18
No. of employees		38	200
Wage paid per month (8h day) = Minimum wage	TSh 50,000		TSh 50,000
Cost of service per month (set by municipality)	TSh 2,000 per residence TSh 10,000 per business	TSh 10,000 per business	TSh 1,000 per residence TSh 10,000 – 150,000 per business
Fee recovery rate	50 % of residences pay 70 % of businesses pay	25 % of residences pay 75 % of businesses pay	35 % pay
Who collects fees	Subcontracted on a commission basis		
Street & verge cleaning contract	Yes	Yes	Yes \$ 1.50 per every 500 running metres
Comments	Tries to accommodate users by varying level of service.		Supplies industrial waste collection service using mobile compactors.

A3.4.3 Issues raised by franchisees:

- Collection of fees by the franchisee is a problem – they would prefer municipality to do this.
- Franchisees need municipality to assist in educating the users of the service thereby increasing fee recovery rates.
- Duration of franchise agreements should be sufficient to allow for full depreciation of assets.
- Willingness to pay should be determined and taken into account.
- Byelaws relating to collection franchises should be revised.
- Court procedure for defaulters should be simplified.
- Disposal fees are too high.
- Franchisees need political support.
- Emerging or new markets should be explored.
- Charging at transfer points.
- Resources for low-income areas.

A3.4.4 Issues raised by Group D:

- Concern about non-recovery of fees and sustainability of service. Mechanism for follow-up of defaulters is not easy if they do not respond to Ward Committee intervention.
- Pre-setting of tariffs by the municipality does not necessarily cover the cost of service or allow contractors to bid on price – seems a back-to-front way of doing things.
- There does not appear to be a full waste stream investigation or planning exercise done before implementation of a service.

- Who is responsible in the case of an emergency e.g. cholera outbreak – municipality?
- A waste business association to lobby for the franchisees exists but is not supported.
- Municipality could assist by being more involved and supportive in educating the public about the service.
- Opening up alternatives or complementary services that franchisees could add to the collection and street cleaning services could help sustainability e.g. security service; processing garbage to add value to it.
- Low-income areas are not attractive to large franchisees although they might assist in making transfer points available to small contractors.
- Should the franchisees be registered as financial institutions if they have a third party collecting fees for them?
- Health of workers, personal protective equipment.
- Are recyclables recovered? This does not seem to happen with large franchises.

A3.5 Group E: A company, an NGO and a CBO

Report prepared by Chris Zurbrügg

A3.5.1 Background Information

a) *Private Operator*

- *Represented by* Mr. Manfred Lyoto, Managing Director of Lyoto Ltd.
- *In operation* since 1998 in Temeke Municipality, and 1999-2001 in Micocheni, Kinondoni Municipality; covering an area that has both low- and high-income residents.
- *Current status:* Franchise expired in 2001, but service was continued without an agreement. A new offer was submitted for same area and now they are awaiting a reply. They have 4000 to 5000 customers, 55% of whom pay the refuse collection charge. Payment rates were improved by ILO training in communication skills. This also gives advantage in the tendering process.
- *Workers:* 40 workers in collection, 24 in sweeping and 15 in recycling; all of mixed age; sweepers are mostly women.
- *Special issue:* Lyoto was assisted by the Commissioner to change area which improved the possibility of profit (servicing a high-income area). Started with no truck and had to hire a truck for secondary collection (TSh 6,000 for both ways). Invested 3 months of capital (TSh 3 million) before first revenues started dribbling in (TSh 150,000). Firms were not keen to hire trucks for transporting waste as they corrode faster. Now Lyoto owns 6 trucks (valued at about US\$ 1,500 each).

b) *NGO*

- *Represented by:* Mr. Patrick Komba, of TECA
- *In operation:* since 1999 in East and West Upanga Wards, Ilala Municipality; covers high income area
- *Current status:* awarded franchise November 2002 for a period of 3 years.
- *Workers:* Between 100-150; many of whom are under 35 years of age.
- *Special issue:* They do not own enough equipment and are now trying to buy trucks.

c) *CBO*

- Represented by: Mr. John Ndomba
- In operation: since 2001 in Makulumla, Kinondoni Municipality; low-income squatter settlement, having 1,000 households.

- Current status: 2001 and 2002 without franchise, have now submitted offer and are awaiting reply.
- Workers: 10 collectors, 2 fee collectors, 3 sweepers of marketplace (main market area). Subcontracting CBO which also includes 3 community leaders as "voluntary" workers.
- Special issue: Willingness to pay is very low. Has, until now, not made any profit. Workers earn TSh 1,000 (US\$ 1) per day.

A3.5.2 Issues raised by all three schemes

The representatives of the three systems with different organisational status (company, NGO, CBO) do not see much difference between each other. The company manager mentioned that it is easier to manage a private enterprise (boss system instead of member system). An NGO differs in how profits are used but is also profit oriented. The CBO envisages to progress to an NGO and then to become a company. The municipality treats them the same, independent of their status. Checking applications for franchises includes inspecting a bank statement and checking the workforce (often hired after the franchise is awarded). Tax payments differ between the systems. While the company pays license fees of TSh 8,000, tender fees of TSh 10,000 and a city service levy of TSh 16,000, the others only pay the tender document fees of TSh 10,000.

The disposal fee for all is TSh 2,000 (US\$2) per ton.

The role of the municipality is seen to be to mobilise the people to pay the refuse collection charge, which definitely failed. This was expected but did not take place. It was also mentioned that the municipality should provide secondary collection for low-income areas.

It took the NGO 2 years to educate people to pay the collection fee because the citizens had not been informed about the involvement of the private sector. Slum dwellers do not pay but bring their waste to the main road. The poor that cannot pay are advised by the operator to recycle what they can to get income for paying the fee. The NGO and CBO initiate negotiations with the poor to find appropriate solutions. The company mentioned that the communication courses of ILO helped to raise the rate of fee payment from 55% to 65%. However as the neighbours that did not pay were not penalised and the service was provided nevertheless, the paying population felt cheated and stopped paying themselves. They cannot enforce penalties but can only report to the ward level, where little action is taken. They also felt that the municipality would be the better entity to collect charges as they have better possibilities to enforce sanctions for non-payment. (This would represent a change from the franchisee system to the contract system). Now byelaws have been issued but enforcement is lacking. Also court cases take a lot of time and need financial resources which can often not be spared.

There are competitors in the bidding for the area where the company is working; however, as they have little experience, they do not stand much chance. ILO training certificates also give an advantage in the tendering process. There are no other collectors operating unofficially in the same area. The CBO and NGO also have no competition in their areas.

Finding workers is not a problem because of the high unemployment. The company experiences frequent turnover of staff (every week). The NGO representative mentioned that workers stay 2-3 months, and CBO workers stay up to one year. Sweeping is usually done by women. They are usually older than 35 years of age. Many young people are employed - mostly men (<35 years).

Healthcare waste is often mixed in the waste and thus poses additional risks, although it is officially prohibited to discard healthcare wastes with general municipal wastes.

A solid waste contractors' association exists and meets monthly.

Annex 4 *SWOT* analysis of situation in Dar es Salaam

A4.1 Introduction

The SWOT Analysis is a tool that is commonly used in business planning to analyse the strategic position of any organisation with respect to the Strengths, Weaknesses, Opportunities and Threats that it faces in its operating environment. In general, the *Strengths* and *Weaknesses* relate to the organisation's internal environment whereas the *Opportunities* and *Threats* relate to factors that are to be found in the organisation's external environment. This analysis has been carried out from the perspective of the City of Dar es Salaam's strategic position with respect to the implementation of the franchise system for collecting waste in the formalising areas of the three municipalities that make up the city.

Workshop participants discussed with some franchisees and visited briefly the areas where some of them are working. Then they discussed what they had seen and suggested strengths, weaknesses, opportunities and threats according to what they had seen and heard. These lists were compiled and can be found on the CD, together with a record of discussion points that were made in the early stages of the analysis. However, the groups had not had much chance to discuss and evaluate the validity of each suggestion, and there were differences in the understanding of the purpose of a SWOT analysis and the meaning of the four main terms. Therefore a second stage was built into the process – a second working group was set up to refine the initial lists and make them more consistent. This Annex presents the output of this second group, which worked under the leadership of Ray Lombard.

At the outset it must be stated that those members of the working group that had visited Dar es Salaam a number of years previously had noticed that the city was very much cleaner than it had been. Workshop participants discovered that the City had implemented a franchise system for waste collection using small enterprises to collect waste. Interviews and meetings took place during the workshop with franchisees operating in the three municipal areas of the City. These meetings were followed up with site visits to see the collection and disposal operations that are currently taking place in these municipal areas.

It was noted that there were a number of problems related to the implementation of the franchise system. In order to provide some assistance to the City of Dar es Salaam this *SWOT Analysis* was carried out.

A4.2 Results

A4.2.1 Strengths

There are not many strengths but they do relate very strongly to the objective of creating capacity to provide services to low-income areas and the creation of jobs as a means of poverty alleviation using local resources. The strengths are summarised below:-

Potential for job & income generation	Opportunities for initiative & entrepreneurship
Contributes to community cleanliness	Access to existing infrastructure, e.g. landfill
Good partnership with Municipality	Wide participation
Regular, reliable waste collection & transport	Low-technology equipment & local resources
Customer-friendly & flexible system	

A4.2.2 Weaknesses

There are many weaknesses which must be addressed in order to ensure success with the implementation of the Franchise Programme.

<p>Difficult to recover fees from non-payers. Poorly enforced and weak byelaws. Business skills weak, e.g. marketing, plans & account system. Change or loss of franchise area when new tender. Some franchisees not paying disposal fees. Inadequate communal transfer areas. Poor transparency in monitoring process. Design of process, e.g. double handling of waste. Inadequate contract management & conflict resolution. Inappropriate equipment and protective gear. Occupational and health hazards not addressed. Poor access road to disposal site affects service delivery. Weak community participation and awareness. Short-term contracts.</p>	<p>Poor political support. Uneven level of service. Ambiguity of roles and responsibilities. Economies of scale missing at procurement. No integrated policy linking SWM to bigger picture. Not fully adapted to the local situation. Lack of regular and reliable timetable. Collection system is irregular. Rigid fee structure & therefore no open tender competition. Under-utilised resources. If private sector fails can the Municipality resume the service? No separation of health care waste. Capital investments not easily made. No cross subsidy. Street sweepers are at risk of being knocked down in traffic accidents.</p>
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The weaknesses can be distilled into the following major elements:-

a) Waste Management Policy and Strategy

A major problem is that the City does not have a Waste Management Policy, and a strategy for implementing that policy. Many of the weaknesses may be addressed by developing a Waste Management Policy for the City. Such a policy will require a thorough examination of the waste streams that are produced by the City and will have to deal with the elements of the *Hierarchy of Waste Management*. A Waste Management Strategy will then be developed relative to the above-mentioned policy and this Strategy will lead to the revision of byelaws that are used to reinforce the City's position on waste management. The revision of the byelaws will address most of the problems relating to service fee recovery, illegal dumping and the unauthorised competition that the franchisees are currently experiencing in the three municipalities from non-franchised operators who are undercutting the official tariff structure.

b) Political Support

It is also a matter of considerable importance that the political will of the City Fathers must be made known to the grass roots communities with respect to their responsibilities in the matter of paying for the waste services that they receive. Accordingly, the Mayor/s and their respective Councillors must demonstrate their support for this important waste management initiative on a regular basis.

c) Contract Periods of 12 months or even 36 months are too short

The Franchisees cannot be expected to invest in plant and equipment, nor will they innovate, within the duration of their contracts, because the durations are too short. A period of at least 60 months should be set for a contract or franchise agreement to enable the franchisee to amortise investments that they might make to improve their services.

d) Financial Investments

Relative to the above point these entrepreneurs have difficulty in securing financial assistance in the way of loans from the banks to invest in capital items. This is partly due to the short-term nature of the contracts but also due to the fact that banks might perceive SMEs to be high-risk businesses. Therefore, ways need to be found to assist these franchisees to gain access to the required capital at reasonable interest rates.

e) Public Awareness

It is very much apparent that the general public is not aware of the connection between poor waste management and disease. They are also not aware of the need to pay for these services and this is impacting severely on the viability of these contracts. Political support and administrative support from the officials involved in the City’s waste management system is very important in addressing this situation.

A4.2.3 Opportunities

There are many opportunities which relate to a system operating in a conducive environment. These opportunities represent all the good things that the City and its citizens can look forward to receiving from implementation of these initiatives. However, before anyone can benefit from these opportunities, the weaknesses must first be addressed.

Cross-subsidisation to make the system affordable	Enhance political support.
Create a revenue-collecting body with prosecuting power.	Labour-intensive employment.
Create an inspection body to police against illegal dumping.	Improve technical design, avoid double-handling.
Review refuse charges paid by customer.	Municipal support through capacity building.
Scaled fee system for L, M, H income.	Cost reduction for municipalities by activating more CBOs.
Longer franchisee contract period (minimum 5 years).	Replicability and expansion.
Training basic business skills, bookkeeping.	Upgrading infrastructure.
Charging dumping fees to all franchisees.	Partnerships of local authority, private sector and the community
Create awareness in franchise areas.	Central government subsidy or tax incentives.
Strengthen partnerships with the municipality.	Commercial multiplier.
Strengthen the association of franchisees.	Capacity building for franchisees.
Create markets for recyclables and compost.	Technology and skills transfer.
Promote entrepreneurship.	Community is made aware through campaigns.
Create credit facility at moderate interest rate.	Franchisees motivated and enthusiastic.
	Created demand for services.

a) Cross-subsidisation

Cross-subsidisation relates to one of the more useful opportunities designed to bring cost-effective services to these low-income communities. Indeed, the official tariff structure

demonstrates that the City has already thought about this and acted to address this. However, an unwillingness to pay on the part of the beneficiaries seriously hinders this good idea. It must be noted that it is not necessarily the very poor who are not paying for the service as the results of the survey were quite anomalous on this point.

b) Effective Public Awareness

The application of the *Tidy Town System* or a *Keep Dar es Salaam Beautiful* programme would greatly assist in making public awareness campaigns effective. In this regard, both the franchisees and the municipalities must work together to deal with this shortcoming.

c) Business Skills Training for Contractors

Training of the contractors must be provided by the municipalities in order to develop their business skills. The more successful these contractors become, the more sustainable the system will be. Contractors with good business skills will help to enrich the communities within which they live through economic multiplier effects – their success in running a waste collection business leading them - or others - to start up other businesses in addition¹.

d) Materials Handling Problems

Some work is required to streamline the materials handling problems seen at the refuse bunkers and transfer points where double handling is common.

A4.2.4. Threats

Poor legal and institutional framework.	Municipalities should delegate, not abdicate.
Unfair competition from non-franchised collectors.	Threat of takeover by international private sector.
Illegal dumping increases operational costs.	Relocation of dump site and increased costs.
No mandate to enforce collection of fees.	Standards for landfilling and increased fees.
Poor support from the municipalities.	High safety, health and environmental risks.
Poor support from decision makers, risk of political change.	Increasing community expectations.
Dependency on the municipality for growth.	Need for better social benefits for workers.
Variable, unstable income for franchisees.	Threat from donor interventions with other CBOs.
Very poor willingness or ability to pay.	Franchisees have poor business security and high risk.
Municipality withdrawing from secondary collection.	Inequitable dumping fees charged.
Weak markets for recyclables.	Use of higher capacity vehicles

The threats will always be present in the business environment of these contractors but will generally be made manageable when the legislation, byelaws and political will of the leaders of the people are clearly understood by all.

¹ When contractors are successful in their primary businesses, i.e. waste management, they may also initiate other enterprises as their acumen and confidence develops. Ancillary services will also develop to cater for their needs, i.e. exhaust and tyre maintenance services, auto-electricians, panel beaters, welders etc. all start up to service the successful businesses. Once these are established they draw other custom in these areas. The economic multiplier effect happens because the original business becomes the catalyst that starts many other businesses.

Annex 5 Plenary discussion of open topics

Before session 4D (Thursday afternoon) participants had been invited to submit questions for plenary discussion. The questions are reproduced here and the comments that were made in response to them can be found on the CD.

A5.1 Poverty and livelihoods

- How best can we empower the urban poor for the role they need to play in SWM?
- How can livelihood opportunities be enhanced through organised waste collection?
- How can we make sure that the focus of SWM initiatives is linked with poverty alleviation?
- How can large SWM companies involve the urban poor for their benefit (preventing exploitation)?

A5.2 Health and environment

- What are the health and environmental benefits of the collection in low-income areas – do any quantitative studies exist?
- How can health problems associated with indiscriminate disposal of refuse be minimised?

A5.3 Organisation of SWM

- What are the key elements of an efficient SWM organisation in a Municipality or City?

A5.4 Awareness creation and networking

- How can we raise awareness on sustainable solutions in SWM among political decision-makers at the municipal level (council/assembly)?
- How could we support networking of local community-based SWM initiatives?

A5.5 Private sector participation

- Is it necessary to link privatisation of SWM to local government reforms? (Privatisation should not be a delegation of authority or function from the local authority to the private sector without support.)
- How can multilateral banks, donors and local governments be influenced to avoid “monolithic” privatisation ?
- Does privatisation of landfills add to waste disposal efficiency?

A5.6 Disposal

- What are the key factors to enable municipalities to operate landfills in a financially sustainable way?

Annex 6 “Open space” discussions

To many of the participants this was an entirely new way of organising discussion opportunities. Two sessions (i.e. three hours) were devoted to this activity on the last morning of the workshop.

All participants were invited to propose topics for discussion. The topics (preferably in the form of a question) were written on large sheets of paper and fixed to boards at the front of the room. Participants were then invited to sign their names in a space under the issues that they would like to discuss. In this way the most popular topics were identified.

After merging two proposed topics into one group, ten topics were chosen, five to be discussed in the first session and five in the next. The location of each group was specified – all in the main hall.

Discussion leaders then went to the specified locations and other participants were free to wander between the different groups and participate in the discussions for as long as they wished. If anyone found a particular discussion not very interesting, or wished also to visit another group, he or she was free to leave one group and join another. If the numbers in a group became very small, that group was closed.

More information about the actual discussions can be found on the CD.

	Subject	Description
1A	Motivating communities	How to get awareness into communities; getting them to participate in waste management programmes
1B	Safety and health aspects of waste collection	Primary collection workers are exposed to health hazards. That is a big threat. There is no scientific work done on this. There is a need to justify the involvement of the urban poor in this context.
1C	Economic and financial aspects; cost recovery, financial set-up	How to achieve costs < revenues? Optimal allocation of resources. Role of external financing agencies.
1D	Privatisation: How can it help the poor?	Serving the unserved, credit extension, user charges, service levels, contracts & tenders, equipment, institutional form . . .
1E	How do we communicate workshop findings?	What material from the workshop should be disseminated and how can this be done most effectively?
2A	Contractual obligations	Who should observe the contract rules? Who should be the enforcing agency in case of default – say for non-collection of fee from users or contractors not providing the agreed adequate service?
2B	Informal and private sector participation that benefits the urban poor	Improvement of services and urban environment for the poor; employment/job opportunities through I & PSP; integration of informal sector in private sector contracts
2C	Waste minimisation	Waste minimisation will enable cost reduction and protection of the environment
2D	Environmental education and sensibilisation	How can environmental education activities help to improve the SWM in our cities?
2E	Corruption at different levels, stages and scales of SWM programmes, projects and operations	Corruption is often present, but it is not reported, quantified or mitigated. It ruins some of the best conceived projects. It is disastrous.

Annex 7 Proposals for the CWG

Future Development of the CWG

Proposal developed and endorsed in Dar es Salaam, March 2003

CWG Mission and Purpose

Improved solid waste management (SWM) is central to the achievement of several Millennium Development Goals (MDGs), including those related to poverty reduction, sustainable urban development, public health, improved urban governance, environmental sustainability, and climate change. SWM is thus one important sector in many on-going cross-sectoral initiatives in the international community. The cross-cutting nature of SWM, and its relation to so many aspects of the MDGs, is both an opportunity (to make a difference across a broad spectrum) and a threat (if the focus is on one MDG at a time, SWM is never the top priority sector for intervention). SWM has a long history of relative neglect compared to other sectors ('out of sight, out of mind'), even though SWM has been identified as a key priority e.g. in nearly all of the participating cities in the UN-Habitat Sustainable Cities Programme.

The *Collaborative Working Group on SWM in Low- and Middle- Income Countries* ('the CWG') is thus unique, in providing a coherent 'voice' for the SWM sector in these countries.

The mission of the CWG is to achieve **fundamental changes in the approach to urban solid waste management in low- and middle- income countries, through knowledge sharing, capacity building and policy advocacy.**

The CWG seeks to:

- Focus on the needs of the urban poor and on the role of SWM in country strategies for poverty reduction;
- Demonstrate the importance of improved (integrated and sustainable) solid waste management to achieving the Millennium Development Goals;
- Demonstrate the linkages of improved SWM to poverty reduction, sustainable urban development, improved public health, improved urban governance, sustainable consumption and production, combating climate change and protecting biodiversity;
- Work with other fora to ensure that SWM is integrated into those wider agendas¹;
- Influence policy and decision-makers at the local and national level.
- Provide a mechanism for donors to co-ordinate their interventions in this area, and to link them into the wider international agendas;
- Network between practitioners in the North and the South who are working on improved SWM in low- and middle- income countries;

¹CWG recognises that SWM is just one of the important sectors contributing to a number of the MDGs, (e.g. poverty reduction, improving the urban environment, sustainable urban development, etc), and an important role of CWG is to represent, and play an advocacy role on behalf of, the SWM sector in wider 'umbrella' organisations addressing these broader issues. However, CWG is the only group specifically representing the SWM sector's interests in the development agenda in a multi sectoral way, and the Dar es Salaam meeting thus decided that its main focus must remain on SWM.

- Bring together all the disciplines needed for integrated and sustainable SWM (social, economic, financial, institutional, political, technical);
- Set the international agenda for improving SWM in low- and middle-income countries;
- Develop guidelines and document best practice in SWM in low- and middle- income countries; and
- Build capacity on a regional basis.

Introducing the CWG

1. The CWG is a consortium of *waste management practitioners and professionals from both the North and the South* (and potentially also the West and East), who have won their spurs in various aspects of urban waste management (with a specific focus on low- and middle- income countries). ***The CWG network of experienced solid waste specialists in the South is one of its key strengths.***
2. The CWG incorporates knowledge and experience from both municipal policy makers, local communities and non governmental organisations (NGOs), as well as practitioners, consultant, researchers donors and other international organisations, and considers them to be the focal group for the CWG.
3. Likewise the CWG incorporates views, opinions and experiences from environmental and neighbourhood organisations in the South, and through them, the needs and experiences of the urban poor (both in terms of the need for a SWM service to keep their neighbourhoods clean, and of SWM and recycling as a source of their livelihood). ***The focus of the CWG on the needs of the urban poor is another of its key strengths.***
4. The CWG operates as a network organisation and centre of expertise ², to integrate in a flexible way various organisations which possess a wealth of knowledge, and thus to make their knowledge available to a wider audience.
5. The CWG promotes integrated and sustainable solid waste management (generally abbreviated to integrated sustainable waste management or ISWM), an approach to solid waste management beyond the usual technical, financial and equipment-oriented approach, but taking into account local social-cultural, environmental, institutional, financial/ economic and policies/political aspects.
6. The CWG sets the agenda on ISWM for low- and middle-income countries, developing knowledge tools, initiating evidence-based research and convening workshops to move that agenda forward.

A summary of the CWG's track record

1. CWG has since 1995 established its position as the focal point for international activities in SWM in low- and middle- income countries.
2. CWG has already developed a unique body of publications (knowledge base) on which to base a programme of regional capacity building.
3. CWG has held a series of 6 international workshops since 1995, each bringing together a balanced mix of practitioners from South and North.
4. CWG thus provides a unique focal point and voice for (and resource base of) waste practitioners from the South.

² The CWG is **not an individual membership organisation** as such, and does not wish to compete with one of its own organisational members, the International Solid Waste Association (ISWA) (or anyone else). But the networking function is central to CWG, and the development of individual regional networks is included within the proposed future programme (see later in the text).

How to move the CWG forward?

To approach the challenges ahead, we **propose that CWG is set up as a multi-donor programme**, with a 5 to 10 year time horizon.

- Seek support initially for 3 to 5 years, but in the context of a longer-term programme.
- We believe that it is important to involve a number of donors – primarily bilateral and multilateral, but also including the waste management industry and foundations.
- The programme will be modular in nature, so that it is easy for different donors to fund different modules, individual modules can be single- donor or multi- donor funded (as per the preference of the donors). A modular structure also means we can start small and grow organically. However, it is critical to ensure adequate funding for the ‘core’ components, which hold the programme together into a coherent whole.
- The concept is to add value to, and to complement and consolidate, existing programmes in SWM (e.g. UWEP-2, GTZ and KfW programmes, METAP Regional SWMP, ILO, UN PPPUE, DFID KAR, InWent etc etc), and to provide a focus for attracting new funding (i.e to make the whole greater than the sum of the parts).
- The involvement in the CWG of NGOs, experts and practitioners (both from municipalities and the private sector) from the South is important in ensuring that the programme is demand driven.
- The programme will link SWM to, and, very importantly, **use SWM to provide linkages between**, both a number of **higher level international agendas** including:
 - a. Millennium Development Goals (MDGs) and associated indicators
 - b. DAC guidelines on Poverty Reduction (SWM is particularly important for the urban poor and extreme poor)
 - c. Gender, youth and child issues in development
 - d. Improving urban governance
 - e. The Habitat agenda
 - f. Urban environment (sustainable urban development, achieving MDGs through improved service delivery)
 - g. Agenda 21 of WSSD
 - h. Public Health
 - i. Environmental sustainability
 - j. Climate change
- and related **‘bigger picture’ programmes**: e.g.:
 - k. Habitat-UNEP Sustainable Cities Programme
 - l. National Poverty Reduction Strategy Papers (PRSPs) ³
 - m. Sustainable Consumption and Production (Framework of Programmes being co-ordinated by the United Nations Department of Economic and Social Affairs and UNEP)
 - n. Partnerships coming out of WSSD (Johannesburg)
 - Demonstrating Local Environmental Planning and Management
 - National Capacities for Up-scaling Local Agenda 21 Demonstrations
 - Local Capacities for Global Agendas
 - o. Global Environment Fund (climate change)

³ While SWM is an important issue for a large number of the urban poor, both as service users and service providers, it was noted that the environmental paragraphs of most PRSPs are weak; also, that SWM as a sector is cross-cutting, affecting numbers of chapters of the PRSP, so that it often ‘falls into the cracks’.

Organisation of CWG

- One of the strengths of the CWG has been its informal nature, but to receive donor funding, we now need to establish CWG as a bona fide international NGO, with a secretariat and a bank account (while still preserving much of the informality). Information is being sought on precedent organisations, eg the Water Supply and Sanitation Collaborative Council.
- Central functions include facilitating networking, maintaining an interactive web-site, publishing a regular newsletter, organising events, developing guidance materials and knowledge dissemination; and the advocacy role, raising the profile, linking with other fora, developing the overall programme (and raising funding support for it).
- Central functions could be funded explicitly, or via a levy on all the other components. Will depend on feedback from potential donors.
- Proposed structure:
 - A (large) thematic group representing all the stakeholders, with good South-North balance.
 - A small task team to manage day-to-day operations. Proposal: David Wilson (ERM), GTZ (Manfred Scheu), SKAT Foundation (Juerg Christen), WASTE (Arnold van de Klundert).
 - A secretariat, provided by the SKAT Foundation (Adrian Coad).
 - A formal programme review committee (for governance): say 2 representatives of donors; two from the thematic group (from the South); and two from the task team.
- Writing the initial proposal:
 - David Wilson and Adrian Coad have been volunteered.
 - Will use the task team and an initial thematic group for peer review.
 - Will use this workshop output as an early working draft for discussion with potential donors, so that donor inputs can be incorporated at an early stage.
- Marketing: Anticipate intensive effort (led by the executive group) to lobby/present to donors. Will require specific formats for the formal proposal for each donor, so the target list below has been prioritised into two groups. Also, the work involved in preparing numerous formal proposals is likely to mean that question of funding the executive group (and perhaps also the 'donor link person' in each country) will arise sooner rather than later. Initial target donors are shown in Table 1.
- Seeking support from other (international) organisations. The Thematic Group already contains representatives from UN- Habitat (the Habitat-UNEP Sustainable Cities Programme, Cecilia Kinuthia Njenga) and ILO (Alodia Ishengoma, Dar es Salaam). Other targets include UNDP (e.g. PPPUE), UNEP (IETC), etc.

Table 1 – Target Donors (initial link person in brackets)

Initial Target Donors	Other Potential Target Donors
Germany (Manfred Scheu)	Austria
Netherlands (Arnold van de Klundert)	Belgium
Sweden (Adrian Coad)	Denmark
Switzerland (Juerg Christen)	Environmental Industry Foundation
United Kingdom (David Wilson)	Selected industrial foundations
World Bank (David Wilson)	France
	Norway

Structuring the Programme

Goal: To achieve fundamental changes in the approach to urban solid waste management in low- and middle-income countries, focusing in particular on the needs of the urban poor.

Purpose/ Specific Objectives:

- To raise the profile of SWM with decision makers, at city, national and international levels.
- To serve as a centre of expertise and knowledge on integrated and sustainable SWM in low- and middle-income countries
- To build regional capacity for improved sustainable SWM

Main groups of activities and outputs:

1. ***Provide an advocacy function, to raise the profile of SWM at the local, national and international levels.*** An important part of this is to better link SWM into the Millennium Development Goals, in particular that on poverty reduction

Outputs:

- Increased integration of SWM activities in international and national programmes aimed at meeting the MDGs and other international agendas.
- Decision-maker's guide (or similar high level output), developed and disseminated, on the importance of improved SWM to the urban poor (in terms both of providing a clean and healthy living environment and of providing livelihoods / decent work).
- Decision-maker's guides (or similar high level outputs), developed and disseminated, for at least two other key linkages between improved (integrated and sustainable) SWM and international priority agendas (e.g sustainable urban development, improved public health, improved urban governance and sustainable consumption and production).
- CWG actively involved in at least two cross-cutting programmes for addressing these issues (e.g. the framework programme on sustainable consumption and production).
- Specific outputs (& mechanisms) developed to reach municipal decision-makers. Piloted in at least one region/ country.

2. ***Networking of organisations and professionals working on SWM in low- and middle-income countries***

Outputs:

- A co-ordinated programme bringing together the SWM work of different agencies ('the whole greater than the sum of the parts').
- A web-based network, functioning, updated and in regular use.
- Regional networks of professionals in SWM set-up and running. Suggestion is to facilitate the setting up a series of regional networks within the overall programme. Will explore links to ISWA, who are actively seeking new ways to expand their international 'network' of waste professionals to middle- and low- income countries, as one means of ensuring that the networks are self-sustaining into the future.

3. ***Building regional capacity for improved sustainable SWM.*** CWG (and its member organisations) have developed extensive guideline materials and other knowledge products (as have other bodies). The focus now needs to shift to dissemination and uptake of these knowledge products (best practice) and to increasing the range of products available in languages other than English.

Outputs:

- A series of programmes/ projects focussed on capacity building at a regional level both for technical/administrative staff as well as for political decision-makers.

- Regional/ language versions of the key CWG guidelines, available in printed form and on the web. (This could be sub-divided into numbers of sub-projects).
- Regional 'train the trainer' workshops, based on the CWG and related materials, followed up by national and sub-national programmes to enable capacity building.

4. ***Developing new knowledge products on integrated and sustainable SWM in low- and middle income countries.*** CWG is the centre of competency in SWM in developing countries; a key role is to think ahead, and to provide the strategy and vision required by the sector as a whole.

Outputs

- Priority areas selected and work initiated (on a 'rolling' basis)
- Work in the selected areas co-ordinated, case studies pulled together and lessons learned, guidelines developed.

Priority areas discussed in Dar es Salaam

A large numbers of ideas for future work were discussed at the CWG workshop in Dar es Salaam, many of which link together the themes, *inter alia*, of ***poverty reduction, improved urban governance, public-private participation, sustainable urban development, enabling capacity building and sustainable production and consumption.*** These include:

- a. *Pro-poor private sector participation (1)*, through building on the existing informal/ micro- and small- enterprise (MSE) private sector and community based organization (CBO) operations in both primary waste collection and recycling, to build livelihoods and provide decent work. Develop guidelines through consolidating experiences from around the world.
- b. *Pro-poor public-private partnerships (2)*, exploring both how larger scale, more formal contracts can build on rather than displace existing informal services provided by the urban poor, and how they can extend services to the poor.
- c. *Awareness raising / capacity building of municipalities* and other agencies (e.g. to fulfill their obligations in private sector contracts, to promote more transparent tendering procedures, to improve environmental enforcement etc).
- d. *Cost recovery* (billing systems, willingness to pay, willingness to charge).
- e. *Enabling capacity building* through training the trainers (see also both activity group 3 and item c above).
- f. *Participation and consultation* in the context of good governance.
- g. *Indicators for health improvement* through better SWM services.
- h. *Sustainable production and consumption*, in particular appropriate waste minimisation for low- and middle-income countries (to reduce the need for future investment in SWM), and how to promote sustainable recycling through building on the existing informal recycling sector (see also item a above).

Is CWG the right name?

- No! Not specific to SWM in its short form, long form is too much of a mouthful.
- But it has (at least some) 'name recognition' that we need, and we cannot afford to change it just now.....

Annex 8 Comments on cards

Participants were encouraged to write their comments on any aspect of the workshop on cards and pin them to a board. These comments were reviewed regularly by the Steering Group in considering plans for the next day's programme. These are the comments that were made in this way:

Topics for Discussion

- It is good to see that politics and corruption being discussed!
- Lets discuss health
- Health aspects related to refuse collectors need to be discussed in detail.
- Can we have a session on policy for municipal-private sector-CBO partnerships?
- Can we have a session on a policy/legal framework for public-private partnerships?
- Addressing the variable of time in any contractual arrangement and even byelaws and policies
- Techniques to facilitate decision-making based on (technical) expertise? (Bridging the gap between the political and technical levels).
- What about: - financial models; the role of the international private sector (i.e. treatment); the broader picture?
- Cost recovery: franchisees or waste tax collected with electricity bill?
- Creating and facilitating the emergence of political willingness in favour of more sustainable waste management . . . visions?
- The need to start thinking about supporting the establishment of National SWM Companies by national governments or donor agencies (credit, tools and training).
- What about a session on municipal public policies concerning SWM and poverty?
- Finding ways of incorporating the poor in waste collection after privatization.
- Lobbying governments in developing countries and donors
- Environmental education and its impacts on local community participation in solid waste collection.
- If there is free time could we discuss what we really mean regarding community involvement and participation in decision making.
- Privatization of solid waste collection in urban areas without improving disposal will not work.
- How can we run a landfill on sustainable basis?
- An important topic to be discussed is improvement of dumpsite in developing cities.
- Problems associated with indiscriminate disposal of refuse.
- Upscaling and sustainability.
- Efficiency versus employment generation.

Thematic comments

- Presently, donors are putting in more investment for demand generation without strengthening the supply side. This leads to frustration.
- Privatisation of waste collection is good but may result in exploitation of the urban poor. We had better move towards "communitisation" instead of privatization – here lies ownership, partnership and sustainability.
- There was no serious cost-recovery analysis in any paper! Manus Coffey was the only one to mention it at some point (i.e. Is it really a question of lack of money, or is it more precisely a lack of allocation of resources?)
- Though the issue of urban environment that is solid waste management will remain a primary concern to all cities in order to bring sustainable urban development, as resources (be they human, financial or institutional) are scarce, before going into it, projects have to be formulated. As social, economic and environmental impacts and returns should be measured so as to arrive at a conclusion as to the significance of its contribution to the national economy, gross national product, we should consider employment

generation, saving of foreign exchange, value added (recycling) and environmental impacts. Therefore empirical evidence of past performance as well as future prospects add life to the solid waste management agenda. Its importance cannot be promoted unless it is supported with facts and empirical evidences. The other thing that should clearly be taken into account will be the concepts of efficiency, effectiveness, economies of scale and scope with regard to the implementation of solid waste collection systems in different sizes of community – considering the complexity of cities. Therefore, there must be a minimum economic size, in order not to misuse resources.

The situation in Dar es Salaam

- Discussions with franchisees was very interesting - however they seem to have more problems than successes
- In order to solve these problems which hinder the development of franchisees, especially in Dar es Salaam, I can see that political skill is needed, and to build awareness in the people who are getting the services.

The CWG

- Reasons why I (my organisation) should sponsor CWG:- (a) because it is always fun to meet nice people; (b) the CWG provides good networking possibilities and is an excellent source valuable practical information; (c) to formulate a framework for fair play in SWM activities between CBOs and the private sector; (d) to create an enabling environment for decision-makers to meet and find solutions to some common problems.

Workshop procedures and scheduling

- Chairperson to stick to time
- Wished to have more time for the interesting discussions with franchisees.
- Too greedy! The huge number of presentations did not permit in-depth outputs as very little time was given to working groups. Papers (case studies) can be found on the web – one paper to exemplify two or three points would have been plenty.
- Kindly switch off all mobiles
- Presentation of papers is well done. Group discussions - so far good.
- I appreciate for a good discussion which we had since morning up to the evening session.
- I learned much from different papers which were presented by different people from different parts of the world;
- Let us have a common topics for discussion by all groups and compare points/conclusions reached and see the commonality issue for adoption.
- Topics are well presented; time for discussion is so limited so we don't even end up with good resolution.
- The afternoon session needs more time for discussion, if time allows, for success of the paper.
- More in-depth discussions on focused topics and papers in small groups.
- The last session (Thursday) was not very interesting, as compared to yesterday when the people chose the papers to discuss.
- Facilitators and moderators seem to have too little time to prepare.
- Thank you for the smooth organization.
- Much too little time for in-depth discussion with really relevant output!! (Added later) Improved during the last two days! Very good!
- The franchisees did not understand why we were visiting them. They may have thought it was an inspection or there is a possibility of financial assistance.
- Well done so far. Discussion with franchisees and visits were done in a rush.
- The municipal staff and the franchisees should not have been participating in the same sessions. As it was, it was very difficult getting a real picture of the franchisees' reality as they did not want to speak freely.

Annex 9 Feedback on workshop

A9.1 Final evaluation questionnaire

Please answer the following questions and add any further comments on the back. Where there is a range of numbers, please circle the number that best describes your opinion.

(Editor's comment: The questionnaires were anonymous. Numbers have been assigned to each response to enable some linking of different answers. Comments added below are each given a number: the first refers to the question being answered, the second to the number of the questionnaire where this answer was found. [For example 3.6 means the answer to question three that was given by the person who was allocated number 6])

1. How would you rate the workshop venue?

Excellent			Poor
4 [41%]	3 [56%]	2 [3%]	1 [0%]

Please add comments on the reverse. What was the major shortcoming of the hotel?

- | | |
|---|---|
| 1.4 Rooms are too old, bad facilities (internet access), service uneven. | 1.26 Choice of hall could have been better. |
| 1.5 Noisy air conditioning system. (Also #10) | 1.30 Need some technical inputs |
| 1.6 Communications | 1.31 Temperatures unstable |
| 1.14 Power cuts and poor sound quality | 1.48 Internet connectivity, excessively high cost of telephone calls. |
| 1.20 Poor communication systems (personal messages, telephone connections etc) compared to the price charged. | 1.49 Ventilation; the air conditioning was noisy and sometimes switched off resulting in poor ventilation and insufficient air circulation. |
| 1.21 Service was slow. | |
| 1.24 Bad service (Also #60) | |

2. What is your opinion of the preparation of the workshop?

Excellent			Poor
4 [52%]	3 [45%]	2 [3%]	1 [0%]

Please add comments on the reverse. Did you receive enough information and enough time to prepare?

- | | |
|--|---|
| 2.4 Yes (Also #10, 11, 13, 16, 21, 37, 41, 54, 56) | 2.42 There was no sitting allowance for day participants. |
| 2.5 Good information was provided, clear and concise. | 2.48 More than any other conference. |
| 2.22 The <i>Strategic Planning Guide</i> CD should have been distributed when we registered. | 2.57 No, very little. |

3. Please indicate your opinion of the relevance and usefulness of the thematic content (subject coverage) of the workshop.

Excellent			Poor
4 [50%]	3 [47%]	2 [3%]	1 [0%]

Please add comments on the reverse. Was the thematic content of the workshop what you were expecting?

- | | | | |
|------|---|------|---|
| 3.1 | Subject was good however papers often did not analyse but only described. | 3.26 | The focus should have been more on primary waste collection and creation of livelihoods for the urban poor. |
| 3.4 | I had no preconceived idea or expectation. | 3.45 | Too many case studies, lack of overview and comparison. |
| 3.12 | Covered a lot of information needed | 3.48 | Yes, and a lot more |
| 3.13 | Various approaches of collection of waste. | 3.57 | The whole question of planning esp. least developed |
| 3.11 | Yes (Also #16) | 3.60 | Too superficial. We did not zero in on our topic "Solid waste collection that benefits the urban poor". |
| 3.20 | Sometimes the people lost the focus on poverty and social inclusion. | | |
| 3.22 | There is a need to extend solid waste management to include poverty reduction | | |

4. How would you rate the organisation of the workshop?

Excellent			Poor
4 [49%]	3 [46%]	2 [5%]	1 [0%]

Please add comments on the reverse. Was there confusion, wastage of time, hassle?

- | | | | |
|-----|---|------|--|
| 4.3 | Sometimes the facilitators were not prepared, as arrangements were made too short a time before the start of a session. | | to forego some and have more parallel sessions. This could free up time for networking and informal discussion, and reduce the overall length of the workshop. |
| 4.4 | Too many presentations; need for more group work. (Group work should be 70% and presentations 30%) | 4.10 | There was a little confusion in the group work. |
| 4.5 | I do think the workshop was excellently organised, but I find a week of presentations stretches my concentration beyond its limit. I feel the main benefit of the workshop was opportunities for personal contact with other participants, to forge ideas and contacts and discuss areas for cross learning and future collaboration. I learned from some areas of the presentations but feel that some were of more relevance and interest to me than others, so I would have been happy | 4.12 | Not much time allocated for each session |
| | | 4.16 | Everything was well organised |
| | | 4.20 | The methodology was very confused sometimes, indicating a lack in the preparation process. |
| | | 4.23 | Lots of questionnaires to fill in. |
| | | 4.26 | I think it was a meticulously organised workshop. The co-ordination was very good. |

5. Which aspect of the workshop was least useful or effective and so should not have been included in the programme?
- 5.1 Strategic planning was not the topic of the workshop.
- 5.3 Presentations are useful but there were too many.
- 5.4 Uneven quality of presentations. It would be good to have more factual case studies (with more numerical data and before/after comparisons). (For example, if a municipality invests \$x in education, what effect does this have on fee collection efficiencies.)
- 5.6 None (Also # 13, 17, 21, 34, 43, 48, 54)
- 5.7 Recyclable material markets.
- 5.9 Sessions 4D (Plenary discussions) and 5A (Open space) could have been combined.
- 5.11 The late night discussion – it can happen spontaneously.
- 5.12 None, all provided useful information (2)
- 5.20 To make evaluations of the Dar es Salaam system after listening to a few details and visiting a few sites was too long a step.
- 5.24 Too many case studies; 3 days is enough.
- 5.28 It is just good.
- 5.29 Under-prepared interaction with franchisees.
- 5.38 Environment education.
- 5.41 I was most impressed with the way everything dovetailed at the end of the work.
- 5.42 Law enforcement and low-cost compost plant. (Also #50)
- 5.44 I find the programme interesting as it is participatory
- 5.47 Environmental issues (Also #51)
- 5.55 Waste separation at source.
- 5.56 Informal sessions.
- 5.57 Planning and education.
- 5.58 The franchisee pat should only form part of the site and area visits.
6. Which aspect of the workshop should have been allocated more time in the programme?
- 6.1 Making a synthesis of the case studies and franchise experience.
- 6.2 Discussion and solutions. (Also #59)
- 6.3 Discussion with franchisees.
- 6.4 Cost recovery and financing.
- 6.5 Informal networking
- 6.6 Some presentations.
- 6.9 There should have been no more than 3 papers in a 90 minute session.
- 6.10 There should have been more time to interact with the franchisees and municipal officers.
- 6.11 All OK – time was well managed overall.
- 6.12 Field visit to franchisees' workplaces and discussion with them. (Also #35, 36, 54)
- 6.13 More discussions (Also #49)
- 6.15 Working with the poor – empowering the urban poor
- 6.17 Discussions after group reports so that we come up with agreed general consensus.
- 6.18 Discussion after paper presentations. (Also #21)
- 6.19 Case studies
- 6.20 Recycling networks
- 6.22 As always, discussion time was short, but "overflow" time was very useful.
- 6.25 Collection systems, constraints of the poor and how to address them.
- 6.26 Some more videos and poster presentations.
- 6.27 Bottom-up approach.
- 6.29 Technical aspects, with designs from more countries.
- 6.30 More technical and specific details.
- 6.33 Waste minimisation and income generating activities out of waste.
- 6.37 Visits to actual work being done in Dar.
- 6.40 Formation of regional SWM associations and networking with ISWA and CWG.
- 6.41 I think it was just right.

(Question 6 continued) Which aspect of the workshop should have been allocated more time in the programme?

- | | |
|--|--|
| <p>6.42 Awareness creation among low-income communities.</p> <p>6.43 Facilities for solid waste collection and storage in poor communities.</p> <p>6.44 Especially the discussion time for teach paper should have been given more time, but it was satisfactory.</p> <p>6.45 In-depth discussion on selected papers/presentations.</p> <p>6.46 Environmental and health education in general; more possibilities for the municipal participants to give their inputs.</p> <p>6.47 How to involve the community.</p> <p>6.50 Management of sanitary landfills.</p> | <p>6.51 Management of hazardous waste.</p> <p>6.52 The future development of the CWG. The role of MSWM in poverty alleviation. Improved urban governance.</p> <p>6.55 Waste minimisation and recycling as alternative to landfilling.</p> <p>6.56 Discussion of papers could have been achieved by focussing on key papers only.</p> <p>6.57 Education for both local authorities and franchisees.</p> <p>6.58 The 15 minutes allocated for the presentations was too short.</p> <p>6.60 Too much crammed in. No topic was discussed exhaustively.</p> |
|--|--|
-
7. Please comment on the number of participants. Which nationalities or sectors should have had more or fewer representatives?
- | | |
|---|---|
| <p>7.1 80 is the maximum; less would have been better. However, representation was good and might have been compromised if numbers had been less.</p> <p>7.3 Number OK, mixture very good, considering the location.</p> <p>7.4 There should have been more representatives from CBOs and multinationals, and more from Asia and Latin America.</p> <p>7.5 There was a good number of participants, and the emphasis on Africa was inevitable, but not a problem.</p> <p>7.6 OK (Also #10, 37, 40)</p> <p>7.7 African countries should have had more representatives.</p> <p>7.9 There should have been more representatives from the private sector and consultants, and from donor agencies.</p> <p>7.11 More representation from SADC countries and South America.</p> <p>7.12 Developed countries should have few participants.</p> | <p>7.13 Needs more from developing countries to get experience from people of developed countries.</p> <p>7.14 The number was OK, but there was no participant from Botswana, and mayors and councillors from many municipalities should attend.</p> <p>7.18 There should have been more representatives from environmental science.</p> <p>7.19 Environmental sectors should have had more representatives.</p> <p>7.20 There should have been more from Latin America and fewer from Europe.</p> <p>7.21 There should have been more grassroots representatives from developing countries.</p> <p>7.22 Very useful to have "big" PS input.</p> <p>7.24 More representatives from South America (Latin America) (Also #35)</p> <p>7.25 (There should have been more representatives from) developing Asian countries – for example Sri Lanka, Nepal and Indonesia.</p> <p>7.27 (More participants from) Portuguese speaking countries.</p> |
|---|---|

(Question 7 continued) Please comment on the number of participants. Which nationalities or sectors should have had more or fewer representatives?

- | | | | |
|------|---|------|---|
| 7.28 | The number is adequate. | 7.52 | There were very few representatives from outside Africa. |
| 7.29 | Asians should have had more representation. | 7.53 | It was good to have municipal representation. |
| 7.30 | More participants from consulting firms. | 7.55 | There should have been more Asia-Pacific nationals |
| 7.31 | More non-African participants | 7.56 | Some countries (like Zimbabwe and Malawi) were poorly represented. The dominance of participants from Mozambique and Dar es Salaam meant that there was little room for other participants from other countries and regions. Also, the papers presented (> 75%) were by researchers from institutions in the West (e.g. WEDC) who sometimes do not understand the local economic and political conditions in which waste collectors operate. On the basis of the above observations, drawing participants and papers from different countries and institutions would help eliminate the bias. |
| 7.33 | Africa should have had more representatives. | 7.57 | There were few representatives from NGOs, CBOs and private contractors. |
| 7.34 | Balanced | 7.58 | There should be more local participation. |
| 7.36 | A sample of the poor should have been present – i.e. service providers and service recipients. | 7.60 | More participation from African Cities, and more decision-makers from African cities. More grass-roots actors and waste collectors. |
| 7.38 | Angola, Guinea Bissau, S.T. Principe | | |
| 7.39 | More presentations from Latin America | | |
| 7.41 | I was disappointed that there weren't more South Africans present at this meeting. Many of my countrymen could benefit. | | |
| 7.43 | More Tanzanian representatives should have been present, especially from all the nine municipalities in the country. | | |
| 7.44 | Municipalities do have less representatives. | | |
| 7.45 | More from non English-speaking countries | | |
| 7.48 | More from multinationals | | |
| 7.50 | More environmental health officers and engineers | | |

8. Other comments

- 8.2 The workshop was very good. But when you conduct a workshop like this, try to give your ideas. CWG should think twice that we're the 3rd world countries. Our problems are almost the same from one country to another. Give us the best way which can help us much like education, training to learn more.
- 8.3 Excellent workshop, creating new links and common understanding.
- 8.8 More franchisees to be considered.
- 8.11 Well done.
- 8.12 Names, countries and organisations on badges and earlier distribution of the participants list would have helped networking.
- 8.56 Thanks for the good work.
- 8.60 Before next workshop, kindly can all members of CWG group visit developing or underdeveloping and see the actual situation on the ground. (Please see editor's comment e below.)

A9.2 Editor's comments on questionnaire responses

- a) *There is a call for more analysis and for recommendations and guidance. (6.2, 8.1) It is good first to collect information, but there is still a need for analysis and digesting the information that has been received. We need to continue to reflect on, and analyse what we have heard and seen at the workshop, and to contribute to the publication that will emerge from this workshop. For this reason the Skat Foundation, on behalf of the CWG, asks for comments and lessons learned to be sent to the Editor as contributions to the final publication. The workshop process continues.*
- b) *The venue: Clearly the difficulty of accessing the internet was a problem for many. However, it could be argued being relatively isolated enables us to concentrate on the matter in hand rather than being distracted by other responsibilities! In the days before the internet it was much easier to concentrate on doing the current job!*
- c) *Workshop content (questions 5 and 6): The programme was certainly full, and whilst it makes sense to make the most intensive use of the time available and opportunity afforded by the workshop, there is a clear wish that more time be allocated to discussion. There is no consensus as to what items should have not been included. By presenting all the case studies briefly, and then giving an opportunity for selection for further discussion, it was hoped that participants would have the opportunity of going deeper into aspects that interest them. A number of good papers did not appear until well after the deadline (for a range of reasons), by which time the programme had already been agreed in outline, and it would have been unfortunate if these had been rejected. If the CWG is able to put resources into building and reinforcing the network between workshops, this may lead to better information for prospective authors and so fewer last-minute submissions of papers.*

Further, discussion and networking at a workshop does not occur only during the programmed sessions. Often the most useful exchanges take place at other times. With this in mind, a venue was chosen such that participants could also interact at meal times and in the evenings.

- d) *Participation: The participation of more people from Asia and Latin America was not possible for financial reasons. It would clearly be beneficial to have a core representation from all three southern continents at all CWG workshops, but this would require additional funding to pay for more expensive travel costs. Whilst it has often been said that it would be good to have more municipal decision-makers at CWG workshops, it appears that they are not interested in participating, or not available. This suggests that it is the duty of us who participate to find opportunities and means to pass on the main findings of workshops to decision-makers with whom we have contact.*
- e) *Responding to point 8.60: This is clearly an important point. It is essential that inputs and programmes are based on a real understanding of realities on the ground. In a real sense all participants at a workshop are responsible for the content and coverage of that workshop. For this reason attempts were made to ensure reasonably wide representation on the Steering Group and mechanisms for influencing the direction of the workshop by spoken and written comments (which were considered each day by the Steering Group).*

In addition, it can be said that all members of the Steering Group work regularly in low- and middle-income countries. However, it is not always possible for foreign consultants to understand all the constraints and pressures that influence waste management at the grass-roots level, and this is one reason why networking is so important. National specialists can make foreign consultants and managers aware of aspects and influences that are hidden from the outsider. The inclusion of the franchisees in the workshop was also intended to inject an understanding of grass-roots realities.

A9.3 Other comments on the workshop

June Lombard wrote

Although my work often involves me in waste management issues at a community level, the concentrated focus of the workshop on identifying opportunities in SWM for the urban poor gave me an insight that I did not have before, especially because it was coupled with shared experiences of leaders in the field in their own countries.

I woke up to the reality of what it means to be poor and to have waste as the only resource offering me an option for making an honest living. I suffered with the old woman, permanently bent as a result of pushing a badly designed handcart and rejoiced with her when she was given one that lightened her load and allowed her hands to heal. I struggled down the narrow muddy lane between the shacks pushing a heavy cartload of nearly a ton of waste ahead of me to the shrill whistle summoning residents to bring out their waste. I giggled at the resigned donkey dangling in mid air between the shafts of the waste cart while the contents were tipped out into the bunker at a transfer point, and rejoiced with the accomplished young woman taking up a position of leadership in her village on the back of her mother's rag recycling business.

I had the privilege of being hosted by the city of Dar es Salaam who opened up their city to us and allowed us to scrutinize their waste management systems, to analyse, criticize, eulogise... I walked down the dusty streets to the cries of 'Jambo! Karibu!' with a waste collection franchisee whose forbears started doing business in Dar es Salaam five generations ago. I was humbled by the openness of the people involved in the system and their eagerness to learn new and better ways of doing things more efficiently, and impressed at what they have achieved and how much they have to share with other countries starting out on the road to improve their waste collection systems.

I was also enthused by the groundswell of interest in setting up a body for promoting integrated and sustainable waste management in Tanzania – another Chapter in the Institute of Waste Management of Southern Africa perhaps – and an extension to the network that needs to link into the CWG to keep the international perspective.

There is no one of us that knows as much as all of us together. We have all learnt so much from each other and it is vital to keep the lines of communication open and the information flowing. Thank you for making this possible through this CWG workshop.

This has been one of the more worthwhile workshops that Ray and I have ever attended.

Annex 10 Previous CWG workshops

This workshop is the sixth in a series. Details of the previous workshops are as follows:

	Venue	Title, organisation and scope
1995	Ittingen, Switzerland	Ittingen International Workshop on Municipal Solid Waste Management This was organised by SKAT with the World Bank and the Urban Management Programme and sponsored by SDC. It investigated the "state-of-the-art" of solid waste management, and set out the programme of the CWG.
1996	Washington DC, USA	Promotion of Public/Private Partnerships in Municipal Solid Waste Management in Low-income Countries Again organised by SKAT with the World Bank and UMP, hosted by the World Bank and funded by SDC. This workshop reviewed that status and experience of private sector participation on solid waste management, identified gaps and proposed a work programme.
1996	Cairo, Egypt	Micro and Small Enterprises: Involvement in Municipal Solid Waste Management in Developing Countries Organised by the Regional Support Office for Arab States of the UMP, and SKAT, and supported financially by SDC, this workshop considered case studies of micro- and small enterprises involved in the collection and recycling of solid wastes.
1998	Belo Horizonte, Brazil	Waste Disposal Workshop ,98 Upgrading Options of Lower- and Middle-income Countries Organised by the World Bank, and funded by a number of multilateral and bilateral agencies, the focus was on landfilling and composting, and the launching of two publications that argue the benefits of stepwise upgrading of disposal operations.
2000	Manila The Philippines	Planning for Sustainable and Integrated Solid Waste Management Organised by SKAT and funded by Denmark, the Netherlands, Germany and the World Bank, this workshop emphasised the need to integrate all stakeholders, impacts and stages of solid waste management into planning processes. The Strategic Planning Guide and the Guidance Pack on Private Sector Participation were launched at this meeting.

Some copies of the reports of these workshops are available from SKAT (gisela.giorgi@skat.ch). In addition, the report of the Manila workshop and summaries of two other workshops – as Infopage No.1 (Cairo Workshop) and Infopage No.4 (Belo Horizonte) – can be found on the Skat Foundation website < <http://www.skat-foundation.org/resources/downloads/ws.htm#swm> >.

Annex 11 CWG publications

Most of these publications can be obtained by e-mailing urbanhelp@worldbank.org, or can be downloaded from the World Bank web site < http://www.worldbank.org/urban/solid_wm/swm_body.htm >.

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Johannessen, L.M. (1999b). *Guidance note on recuperation of landfill gas from municipal solid waste landfills*. Urban and Local Government Working Paper Series No. 4, The World Bank, Washington, DC.

- Johannessen, L.M. (1999c). *Guidance note on leachate management for municipal solid waste landfills*. Urban and Local Government Working Paper Series No. 5, The World Bank, Washington, DC.
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Annex 12 Words in waste management

Editing papers from writers in many different countries showed me how words are used in such different ways by different people, and I wonder how long it will be before participants at international workshops cannot understand one another any more, even though we are all speaking English. I will give some examples of how different words are used for the same things.

Would it be useful if we could have standard definitions so that, at least when we are writing or speaking to an international audience, we can all understand one another? Could this be one of the duties of the CWG?

Here are some examples of different ways of using words.

Adrian Coad

bin, bunker, enclosure, midden box	These words are used in different places to refer to an enclosed or partially enclosed area designated for depositing waste before it is loaded into trucks and taken for treatment or disposal. In some countries the word "bin" is used only for containers that are picked up and tipped for emptying, and that usually have a lid.
contract, contractor	A contractor provides a service to someone else because (s)he has a contract which guarantees payment for the service from the party (client, grantor, owner) who signed the contract.
disposal	This word may be used to describe what is done by a householder (putting waste into a container for later collection) or it may refer to unloading the waste at its final resting place. It is suggested that we restrict ourselves to this second usage.
dump	As a noun ("a dump") this may be used to refer to a transfer point where waste is unloaded in an urban area before it is loaded into a truck to take it for treatment or disposal, or it may refer to an area outside a town where the waste is carelessly unloaded, with no environmental controls. This dual usage of the word can cause great confusion.
franchise, franchisee	A franchise is an agreement that gives the right to the franchisee to provide a defined service in a defined geographical location for a defined time interval and to collect money from the beneficiaries in return for this service. Usually the franchisee pays a fee to the grantor of the franchise agreement. A franchisee is not the same as a contractor, because the source of income is different.
garbage	According to American usage, garbage is food waste, and does not include rubbish.
landfill	Some people use this word to refer to any site where waste is deposited without the expectation that it will subsequently be removed. Others use the word "landfill" to refer to a waste disposal facility which has been prepared and is operated so that environmental impacts are reduced and operation is improved. It is suggested that the term "disposal site" is used as a general term, and when it is not clear whether the site is operated casually or carefully.
lifting	This word is used in the Indian Subcontinent to refer to the manual loading of waste from the ground into a truck or other vehicle.

platform	This is a word that has become very popular in some circles, and to some people it seems to have a very broad meaning as an opportunity for meeting and sharing views (a forum). Sometimes it seems to mean a committee or a steering group. Others define a platform as "structured computer storage area that is accessible via the internet".
privatisation	Strictly this means the transfer of public assets completely to a private sector organisation. However, often it is used to mean any kind of involvement of private sector organisations or individuals – for which the term "private section participation" is better.
refuse	As a noun, this word is generally taken to be the same as municipal solid waste, but is frequently confused with the word "refuge" meaning a hiding place.
rickshaw, tricycle, van	These words are used in the Indian Subcontinent to refer to a three-wheeled pedalled vehicle which has a flat, load-carrying tray behind the operator's seat.
rubbish	According to American usage, rubbish is domestic solid waste excluding food waste. Therefore rubbish includes paper, plastic, glass, metals and garden waste.
scavenger	This word is often regarded as degrading and not used for this reason. Originally meaning a person who collects night-soil (emptying bucket latrines) it now is more commonly used for people who look for recyclable items and materials in mixed waste.
sweeper	In many countries this refers to a person who removes dust and waste from a road, path or public area. In the Indian Subcontinent it appears to be used also for people who collect waste from houses.
transfer	Normally used to refer to the movement of waste from one means of collection (such as a handcart) to another means of transport (such as a truck or a train). However, the term "transfer vehicle" may be used to mean a vehicle that transports the waste from a transfer point to a disposal or treatment facility – a function often called "secondary collection" or "secondary transport".
trolley	In some countries a trolley is a small platform on wheels which is used to move heavy or bulky loads, often indoors. In the Indian Subcontinent (and perhaps elsewhere) it can also refer to a cart, or to a trailer that is pulled by a tractor or truck.
wheelbarrow	In some countries this is strictly used for a means of transporting loads that has a single wheel at one end and two handles at the other. It is manoeuvrable but relatively unstable and requires considerable effort when carrying heavy loads. In other countries it seems to mean any form of wheeled transport that is moved by human effort, whether it has one, two three or four wheels. It is interesting to note that in India a "barrow" can mean a bowl or basket.