

# Cairo's Zabaleen garbage recyclers: Multi-nationals' takeover and state relocation plans

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## Abstract

The paper investigates recently launched plans to privatize solid-waste management in Cairo, focusing on its adverse effects on the sustainability of the associated recycling economy and urban settlement system of the garbage collectors communities (*Zabaleen*) located within the Muqattam mountain area which is adjacent to Cairo's old historical quarters. According to official development strategy, the privatization of solid-waste services is regarded as fundamental to overall government plans for Old Cairo's rehabilitation. The objectives of the rehabilitation programme tend to favour tourist-orientated projects, whilst ignoring the local population's interests through the removal of informal *Zabaleen* settlements in Muqattam mountain, and through the clearing of the Eastern Cemetery of its tomb dwellers and shanty town buildings.

The study examines the consequences of recent official intervention in the sustainability of the Muqattam *Zabaleen* settlement in terms of physical and demographic growth, infrastructural development, and changes in land tenure system. The paper takes into consideration early 1980s programmes funded by the World Bank to improve the *Zabaleens'* environment and to upgrade their settlement. These aimed to maintain the existing informal settlement pattern and to develop urban service delivery systems.

The empirical study adopts a qualitative analysis employing ethnographic techniques of informal discussions with secondary stakeholder agencies (local municipality, planners, NGOs activists). A field survey of the primary stakeholder group (garbage collectors) involved in-depth interviews with householders and with community leaders in the *Zabaleen* settlement. The analysis explores narratives expressed by members of the *Zabaleen* community in response to the threat of enforced eviction resulting from potential state-controlled gentrification programmes for urban development and land speculation in the area.

The findings emphasize the significance of local participatory mechanisms in restructuring solid-waste collection and in developing the recycling industry whilst putting vacant and under-used areas into productive use. These mechanisms would support the management of built environment and local resources and would build local capacity through developing new channels for co-operation and partnership between the garbage collectors' association (*Gamm'yya*) and grass roots organizations together with the local authorities and multi-national companies. In order to promote sustainable livelihoods and better opportunities for the urban poor the study concludes that there is a need to draw on the sustainable

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flow of local resources within low-income garbage collectors groups, whilst seeking new means of supporting land acquisition and its development for improved housing standards, basic services and environmental quality.

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## Introduction

Cairo's *Zabaleen* waste collection and recycling system received major world recognition and approval at the Rio Earth Summit in 1992. Before and after that accolade the system was the recipient of international funding from the World Bank, the Ford Foundation and Oxfam to assist specific projects to upgrade and improve the recycling of solid waste and the associated settlement and its educational and health provision. The Mega-Cities Project (Neematalla, 1998; Perlman, 2000) went further and sought to project the *Zabaleen*'s programme as a model of recycling garbage to be encouraged in other Third World cities such as Manila and Mumbai. Yet by the early years of the new millennium Cairo's *Zabaleen* were under threat from a government programme to privatize the city's waste collection and disposal with contracts being awarded to multi-national companies employing Western high technology methods. Further, the *Zabaleen* settlement is also under threat of relocation to a new urban development east of the city. An internationally recognized grassroots economic and settlement system is in danger of being discarded and even further marginalized by the Cairo government authorities. What is the impact of the new circumstances on the *Zabaleen*'s socio-cultural and economic practices and on their contribution to the sustainable informal economy?

This study will take up several themes and issues. A major central theme concerns the conflict between a tried and tested low-technology approach to solid-waste collection and disposal and a high technology approach carried out by large companies employing wage labour. Can a grassroots indigenous system of recycling garbage resist being taken over by a supposedly modern large-scale privatized system? It has been termed "the globalization of garbage" (Business Today Egypt, 2004). What are the possibilities of local-global partnership? More than a grassroots-high technology clash is involved here. Related conflictual issues involve a marginal society versus a mainstream economic efficiency situation (Neematalla, 1998, pp. 5–6), a *Zabaleen* society with its embedded rural values versus urban large-scale profit-maximizing businesses, and poorer lower class *Zabaleen* waste collectors versus middle class demands for regular efficient waste collection and street cleaning. Another theme to be touched upon involved the conflicts, actual and potential, between centralizing government ministries and various NGOs, local and international, seeking to foster improvements in the *Zabaleen* economy and society (Ahmed & Ali, 2004). Given the recent contribution of such NGOs can they play a positive role in this new situation of privatization and big company involvement? What is the contribution of local NGOs such as Association for the Protection of the Environment (APE) and Environmental Quality International (EQI) as community advocates and of the *wahyas* as contractors to the *Zabaleen*'s cause over the relocation of recycling activities to Eastern Cairo's new settlements?

A threatening and revolutionary theme involves the possible relocation of the waste recycling activities to a new landfill and processing site several miles to the east of Muqattam and the associated resettlement of the *Zabaleen*'s increasingly upgraded squatter houses. Issues of destabilization, compensation or the lack of it, and social trauma could all be involved if resettlement were to occur (Scudder, 1985). What are the impacts of community resettlement and the relocation of their activities? Is there a chance that the *Zabaleen* would either merge into Cairo's dispossessed urban poor or return to their villages of origin in Upper Egypt as landless labourers?

Rumours and plans for resettlement introduce another issue, namely the suggestion of a hidden agenda involving the redevelopment of the Muqattam area as part of a land speculation and gentrification exercise which could involve adjacent districts such as Manshiet Nasser and the vast Eastern Cemetery or 'City of the Dead'. Together with the *Zabaleen* Muqattam settlement all these low class and largely squatter or spontaneous settlements (El Kadi, 1987) are fairly central in Greater Cairo and have good road accessibility. Developers would envisage considerable profits in their urban redevelopment for the middle class housing

market. How do future scenarios reveal the government's hidden agenda? What is the role played by the state in meeting the poor garbage collectors' needs? Do the government's political objectives concerning the restructuring of waste management conflict with the multi-national companies' feasibility studies of recycling enterprises?

This study will take up these themes and issues, largely examining them through a stakeholder approach, employing local narratives and tables summarizing the findings of individual and focus group interviews. After introducing the *Zabaleen* garbage recycling system and demonstrating improvements and upgrading during the 1980s and 1990s (Assaad, 1998), details are given of the current plans to drastically change the solid-waste management system for Cairo and the threat of relocation hanging over the *Zabaleen's* settlement and recycling activities. The attitudes of various groups of stakeholders are then examined starting with individual garbage collectors and then moving on to community groups and NGOs through to the international waste management companies. Tables demonstrate the different interests and expectations of the various respondent stakeholders. A more detailed examination then follows of the relocation plans and of the threat these represent to the *Zabaleen*.

### Cairo's household waste collection system

About 100 years ago, a group of migrants from the Dakhla oasis (in the western desert) settled in Cairo in an area known as Bab El Bahr (a location between Ataba and Ramses squares, in downtown Cairo) (Assaad, 1998). This group, which became known as the *wahiya* (singular: *wahi*), or people of the oasis, assumed sole responsibility for the collection and disposal of Cairo's household waste by working under contract with owners of buildings. Initially, the *wahiya* paid the owner an initial sum, and then collected monthly fees from the tenants (Haynes & El-Hakim, 1979, p. 102). Later the *wahiya* collaborated with another group of migrants who came to Cairo in the 1930s and 1940s, in search of work. Pushed by economic hardship, these landless agriculture workers from the El Badary district in Assiut (a poor region in the South of Egypt) purchased the waste for use as fodder for pigs breeding (Neamatalla, 1998). They settled in makeshift settlements on the agricultural land at the western and northern fringes of the Cairo metropolitan region. Accordingly the *Zabaleen* community began to emerge as garbage collectors–recyclers living on Cairo's physical, economic and institutional fringes, whilst maintaining ties with their rural origins. They preserve community organization by intermarrying and living in extended families wherein kinship ties predominate. The resulting settlement has been described by Golia (2004, p. 202) as 'a Stygian hamlet whose trash-clogged alleys form the bowels of the city'.

However, there is a distinction between the *wahiya* and the garbage collectors (*Zabaleen*, singular: *zabal*, also called *zarraba*, singular: *zarrab*). The latter, who are also pig breeders, collect the garbage on donkey-pulled carts, accompanied by their children or siblings. Upon their return to the household compound in the settlement, female and younger members of the family sorted the garbage into up to 16 different types of trash (Golia, 2004, p. 41), including making use of the organic waste for feeding pigs. The role of obtaining organic waste for pig rearing is perhaps more important for the *Zabaleen* than initially considered. Pig meat is sold to big tourist hotels rather than to Egypt's Coptic Christian community. It is this aspect of their recycling of waste which presents problems of continuity if relocated to new sites 25 km away. In addition to selling pigs, the *Zabaleen* made a living by selling sorted secondary materials such as paper, tin, rags, glass plastic materials to middlemen.

According to Assaad and Garas (1994, p. 4),

When the carts and trucks return . . . . each day, the garbage is dumped directly into the centre of the family home. Family members quickly make crude divisions of recyclables, sorting out recyclables, separating out paper, glass, clothes. This is an overwhelmingly arduous and unpleasant task that for the most part belongs to women and girls who spend many hours everyday separating garbage.

Whilst hauling the waste and disposing of it became the task of the *Zabaleen*, the *wahiya* retained control over the access and collection rights to the garbage. The relationship between the *wahiya* and the *Zabaleen* was, therefore, hierarchical, with the *wahiya* acting as middlemen between the *Zabaleen* and Cairo's

households. The *Zabaleen*, typically, had no share in the monthly fees paid by those residents, with, many *Zabaleen* being obliged to pay the *wahiya* in order to gain access to the waste garbage (Assaad, 1998).

In the early 1990s the garbage collectors had to comply with the municipality's requirements to use motorized trucks, rather than donkey carts, as the authorities introduced a system of mechanization to transport solid waste (Volpi, 1996). To cope with a situation where no government technical, financial or educational assistance was given to the *Zabaleen* in converting to this new mechanized system, they acquired the capital to purchase trucks through personal savings, through selling small plots of land back in their ancestral villages, or through credit loans. Nevertheless, Volpi's (1996) study provided analysis of the 1989 agreement between *wahiya* and the *Zabaleen* to establish new mechanized companies for waste collection (Environmental Protection Company—EPC). The agreement implies that the informal-sector groups of garbage collectors (*Zabaleen*) are contracted to collect and dispose of solid wastes, by local contractors, known as *wahiya*, with such cooperation transformed into the private EPC. The EPC has the contract for waste collection in several parts of the city. Although the responsibilities for solid-waste management have long been shared by the municipal sanitation service and the *Zabaleen*, the formation of the EPC established *wahiya* and *Zabaleen* as key participants in the local government's programme to upgrade solid-waste management in Cairo. The *wahiya* administer the system, market the company's services, collect household charges and supervise service deliveries. The *Zabaleen*, many of whom might otherwise be homeless and without employment, collect and transport the waste. More recently, as the *Zabaleen* have become more involved in the work, some have received a minimal fee from the *wahiya* (Assaad & Garas, 1994).

### The Muqattam *Zabaleen* community

The *Zabaleen* are now scattered over 7 garbage collector settlements in the Greater Cairo Urban Region. These are Ein El Sira; Moatamadia; El Baragil; Tora; Ezbet El Nakhl; Helwan; and Muqattam. Most of the 7 garbage collectors' settlements in Cairo have been moved by the municipality to more peripheral locations as a result of urban expansion, with the largest *Zabaleen* community being situated at the foot of the Muqattam mountain, east of Cairo (Figs. 1 and 2).

The *Zabaleen* Settlement in Muqattam, was established in 1970 when a group of squatters, after a series of evictions, most recently from Giza, was assigned an abandoned quarry area by the municipality (Assaad & Garas, 1994; Meyer, 1987; Shorter, 1989). Similar to other *Zabaleen* settlements, the Muqattam community, during this period, suffered from high mortality and morbidity rates (especially among children), high incidence of animal epidemics, widespread illiteracy, poor environmental conditions, and low income. In 1983, the average household income per month was estimated at LE 70, within the lowest 10th percentile of national urban income levels, with an average large household size of 8 persons. In 1981 the Muqattam settlement was the specific focus of a World Bank up-grading programme known as the *Zabaleen Environmental Development Program (ZEDP)*, and for more than 10 years it has been the recipient of a significant amount of financial resources made available by international donors (Assaad, 1998; Motaal, 1996, pp. 82–83; Neamatalla, 1998, pp. 6–8). As a result, the community's living conditions have exhibited major changes compared to other *Zabaleen* settlements in Cairo. While the latter are still slum areas, most Muqattam people live in concrete buildings, with their settlement being provided with basic infrastructure. About 20,000 people now live in the 'Garbage City' of Muqattam, the settlement having grown from a population of 8000 in the early 1980s, and almost all of them live off, or are involved in, garbage activities. It is estimated that the *Zabaleen* informally handle one-third of Cairo's garbage from 14 million people (Golia, 2004, pp. 41–42). Specifically, this means that the *Zabaleen* collect up to 3000 tons of garbage every day and up to 85% of that waste is recycled by them directly through micro-enterprises that generate jobs and incomes for some 40,000 people (by producing handmade crafts from rags and paper). They have invested money earned from recycling in their trade and in building homes in the settlement (Volpi, 1996).

Garbage collecting and recycling is a household activity with women and children participating in the collecting and then the sorting of garbage. This is an arduous and unpleasant task that for the most part belongs to women and girls who spend up to 10–12 h each day separating garbage as part of their 'triple burden' (Assaad & Garas, 1994; Motaal, 1996, p. 77). In Muqattam mountain, the *Zabaleen*'s principal enclave, 700 families own collection enterprises, 200 own and operate small- and medium-scale recycling

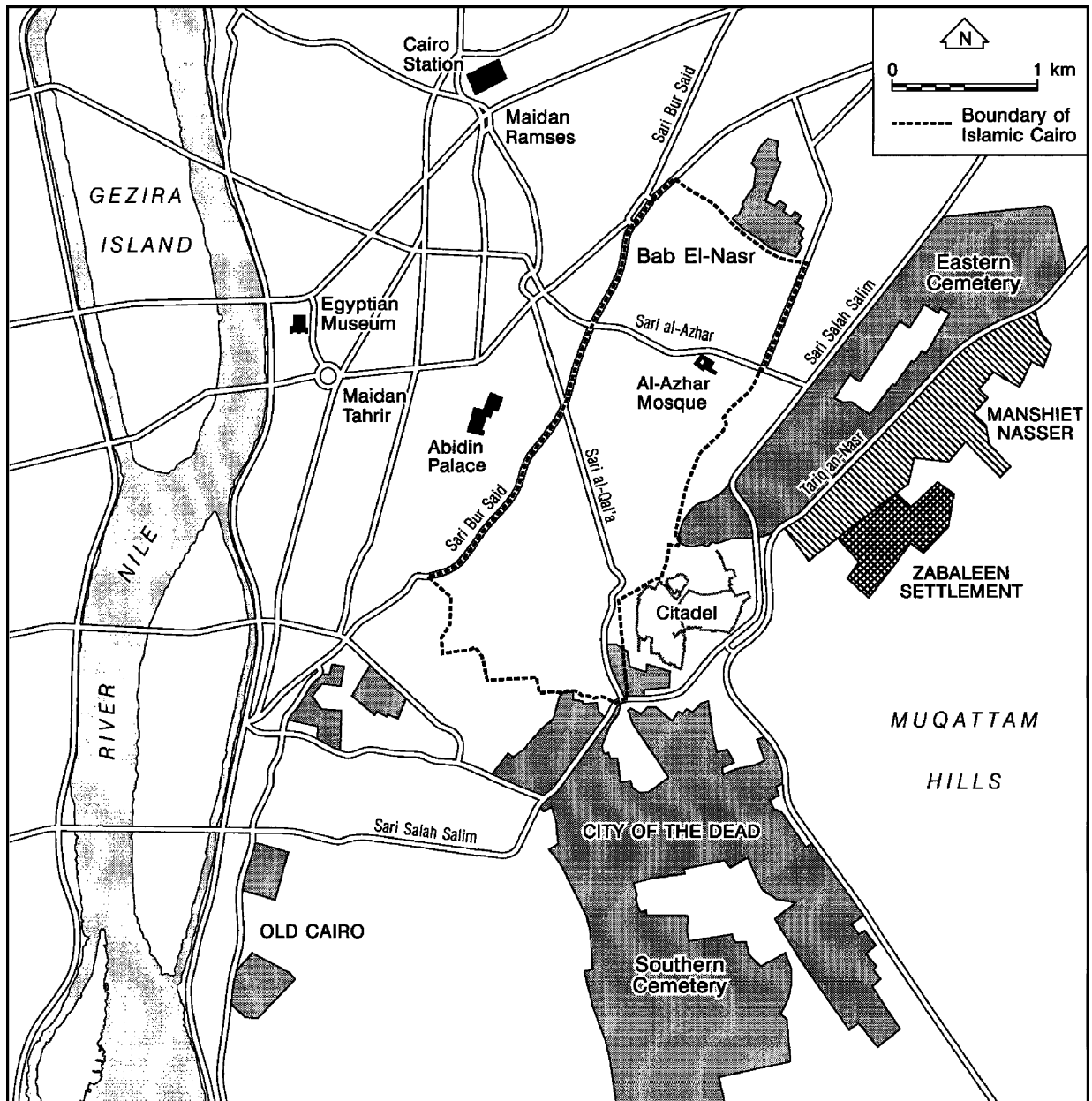


Fig. 1. Location of the Muqattam Zabaleen settlement and cemeteries in Cairo.

enterprises, and 120 own trading enterprises, in addition to maintenance workshops and community-based service businesses (Kamel, 2003, pp. 3–4). These micro-entrepreneurs have invested an estimated 2.1 million Egyptian pounds (LE) (US \$ = LE 6.19—May 2004 rates) in trucks, plastic granulators, paper compactors, cloth grinders, aluminium smelters, and tin processors. Their methods for handling plastics, paper, cardboard, glass, metal, fabrics are constantly being revised as they upgrade and diversify their recycling know-how. Thus the Zabaleen have greatly improved the capability of the city of Cairo to manage its solid waste and at no cost to the city administration. According to a local NGO the Community and Institutional Development (CID) the average monthly wage for the waste-handling worker in Muqattam ranges from LE 360 to LE 450. The

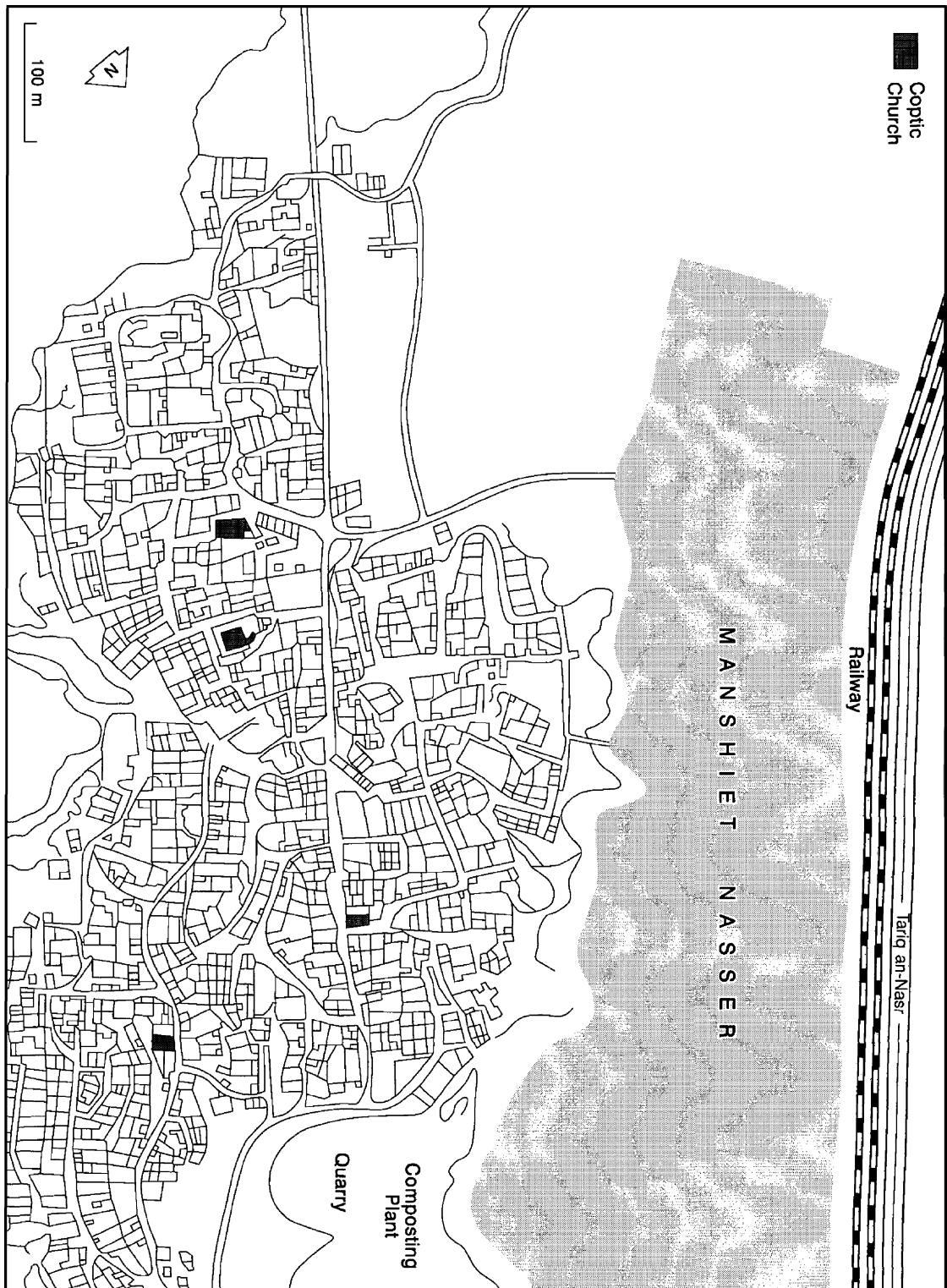


Fig. 2. The layout and morphology of the Muqattam Zabaleen settlement. *Source: Volpi (1996), Environmental Quality International (1997).*

highest paid workers are those in the recycling industries, while the lowest paid are in the collection and transportation of waste.

Over time the *Zabaleen* have established community-based organizations and improved the infrastructure of the Muqattam settlement, with micro-enterprise recycling industries being launched, and with household income-generating projects being implemented (Neamatalla, 1998). In the 1980s, they began to enroll increasing numbers of their children in schools, especially girls, whilst introducing health programmes in order to reduce neonatal mortality rate. In addition, the environmental benefits of the *Zabaleen* waste recovery system contributed to uncontaminated organics being sorted for the production of a higher grade compost, with retrieval of 80% of the materials, with the remaining 20% being dumped on the outskirts of the city. In comparison, the European Union is aiming for 40% recycling rate and the big companies in Cairo a mere 20% (Business Today Egypt, 2004). Their recycling system prevented land from being used as unsanitary landfills as well as protecting the air from the uncontrolled burning of garbage. About one-third of Cairo's waste is not collected, mainly from poorer districts, and this remains as a pollutant in the streets (Hopkins & Mehanna, 1997, p. 24). Despite unimproved environmental conditions within the settlement, the *Zabaleen* have used urban wastes to secure their livelihoods and to create financial assets in order to invest in essential community infrastructure, education, and other services.

Despite the physical improvements achieved within the *Zabaleen* Moqattam settlement since the 1980s by the World Bank funded programme, Neamatalla (1998, p. 19) mentioned poor management and leadership skills, which have resulted from a lack of human resources development and of initiative. This situation led to a degree of dependency on his organization, the Environmental Quality International (EQI, 1981).

The influx of donors and funds in the area has created dependency whereby the *Zabaleen* have gotten into the habit of receiving. They are prone to ask for money to start up a project rather than improvise or be innovative or even productive. (Neamatalla, 1998, p. 20)

The programme, supposedly based on community participation, failed to ensure adequate representation by the community. It relied on a board of directors most of whom were outsiders and so did not reflect the needs of the community. They allowed their personal interests to take precedence over the needs of the people. This generated apathy and indifference as many of the *Zabaleen* remained skeptical about the real intentions of such organizations. Economic benefits were not distributed equitably as the more powerful families remained a step ahead of ordinary families as they were more willing to take risks and to try new methods. The resulting growing gap exacerbated established sources of conflict and tension (Neamatalla, 1998, p. 20).

### **Physical conditions of the Muqattam *Zabaleen* settlement**

Initially, the current study employed Assaad's (1998) physical survey of the 1993 situation following the Muqattam rock fall which collapsed on an area at the border of the *Zabaleen* settlement, killing 40 people. Such an event brought garbage collectors to the attention of public opinion and national decision makers, with official authorities consequently demanding their resettlement from the Muqattam area. However, the *Zabaleen* association (*Gammiyya*) played a significant role in delaying government's resettlement plans (Volpi, 1996).

#### *Population and physical growth*

The Muqattam *Zabaleen* settlement is located in a rapidly growing belt at the eastern fringe of Cairo. It is part of the Manshiet Nasser Shiakha (a minor administrative unit), which also includes the Manshiet Nasser settlement, a more typical squatter settlement, which was also subject to urban upgrading efforts in the 1980s. Nevertheless, Assaad (1998) noted that urbanization of the Muqattam *Zabaleen* settlement exhibited both densification and diversification of land use, as a consequence of security of land tenure, high land values, in addition to its location, between road traffic arteries (Salah Salem Street) and the foot of Muqattam Mountain, which constrains future lateral expansion. This encouraged members of the settlement to pursue less land intensive activities than pig raising, resulting in a diversification of the activities of the settlement.

Table 1  
Population growth rates in selected geographical units, 1976–1986

Geographical unit	Population in 1986	Average annual growth rate—1976–1986 (%)
Muqattam <i>Zabaleen</i> settlement	8500	8.7
Manshiet Nasser Shiakha	83,282	11.6
Moatamadia Village <i>Zabaleen</i> settlement	54,692	10.9
Baragil Village <i>Zabaleen</i> settlements	30,443	8.1
Cairo Governorate	6,007,280	1.7
Greater Cairo Urban Region	9,209,403	2.6

Source: CAPMAS, 1976 and 1986 Population Censuses in Assaad (1998).

The Muqattam *Zabaleen* settlement recorded a population growth rate of nearly 9% per year from 5514 inhabitants in 1981 to 15,577 in 1993 (Table 1). Neamatalla (1998, p. 15) records that infant and child mortality rates in Muqattam have dropped from 240 per thousand in 1979 to 117 per thousand in 1991 but they remained higher than Cairo's rate for the 1990–1995 period which was 45.6 per thousand. Assaad's (1998) survey revealed that in-migration was evident amongst a quarter of the sampled household heads who moved to the settlement after 1981, representing approximately 490 households. Although the population of the settlement has more than tripled since 1981, there has been very little expansion of the physical boundaries of the settlement. Most of the growth occurred through densification, filling in small open spaces on the fringes of the settlement and through vertical expansion from one- to multi-storey buildings. However, the total number of plots increased from 905 plots in 1981 to 1387 smaller plot subdivisions in 1993. A similar figure is given by Neamatalla (1998, p. 17) who claims "there are 1394 houses in the settlement, many of which are multi-storey structures. Most of the houses were built using concrete and brick."

As a result of their long history in the Muqattam area, the *Zabaleen* have until recently relatively secure land tenure, a situation that allowed them to invest in their settlement, turning it from a low-density rural settlement to a dense urban community with a diversified economy. In contrast, the settlements of Moatamadia and Baragil, which continue to be characterized by precarious tenure arrangements, have remained basically rural enclaves in the midst of rapidly urbanizing surroundings. Similarly, when some of the present residents of the Muqattam *Zabaleen* settlements were previously located on the fringe of the urban agglomeration in Giza, rapid urban growth led to the increase in land values, thus resulting in their eviction and relocation on less valuable land. This time, the *Zabaleen* of Muqattam have remained on the land and have capitalized on the increases in land value that normally take place when a settlement becomes urbanized and infrastructure is introduced. As a consequence of the Urban Upgrading Programme launched and funded by the World Bank in 1981, coordinated by EQI, improvements in the housing stock were noted, with the introduction of water, sewer, electric and road infrastructure in 1983 and 1984. The 1980s urban transformation was mainly attributed to public expenditure in infrastructure and to private investments by members of the community in housing improvements (Assaad, 1998).

#### *Land use changes in Muqattam settlement*

Land use patterns within the Muqattam settlement revealed a reduction in the number of plots used for pig raising (*zeriba*) and an increase in residential plots and in commercial and industrial uses. Table 2 shows a decline in plots containing *zeriba* activity, from 583 in 1981 to 424 in 1993, with plots combining residential and commercial activities increasing from 5 in 1981 to 210 in 1993. With the continuing rise in land values, this trend away from the relatively land-intensive activity of pig rearing is expected to continue as more 'urban' activities are growing. The settlement has also become a place that rural migrants who are not directly engaged in the 'garbage' business are increasingly willing to live. This could be noted in the predominance of single-use residential land use pattern (more than one-third of the building units in 1993). Whilst the settlement was regarded in 1981 as exclusively a place where people resided and engaged in waste collection and sorting



Table 2  
Land use within the Settlement—1981 and 1993

Activity	Units 1981	% 1981	Units 1993	% 1993
Combined activity				
Residential & <i>Zeriba</i>	492	54.4	331	23.9
Residential & commercial	5	0.6	210	15.1
Residential, commercial & <i>Zeriba</i>	4	0.4	51	3.7
Residential & storage	5	0.6	44	3.2
Residential & industrial	2	0.2	23	1.7
Other activities	31	3.4	110	7.9
Subtotal	539	59.6	762	54.9
Single-use activity				
Residential	260	28.7	519	37.4
<i>Zeriba</i>	87	9.6	42	3.0
Storage	19	2.1	38	2.7
Industrial	0	0	26	1.9
Subtotal	366	40.4	625	45.1
Total number of lots	905	100	1387	100

Source: Assaad (1998, Physical Censuses of the Settlement—1981 and 1993).

activities, it is now characterized by mixed land uses (Table 2). Whilst the number of plots dedicated to waste collection and sorting activities declined by half, nearly one-quarter are used for exclusively residential purposes and one-fifth for commercial and industrial activities (Assaad, 1998).

### Housing

In 1981 there were 735 buildings in the settlement, mostly one-storey structures, consisting of several rooms, built in stone, attached to a courtyard and pig shed (*zeriba*). During the period 1981–1993, the number of buildings in the settlement has almost doubled reaching 1394 buildings, many of which were multi-storey structures. While the building boom of the 1980s has greatly increased population density at the settlement, more dwelling space per person resulted in a decline in average density of 3.66 persons per room in 1981 to 2.79 persons per room in 1993.

Because of their history of precarious settlement and eviction, the *Zabaleen* residents adopted a practical housing option in terms of flexible temporary tin structures, which were easily movable. In 1975, a total of only 5 houses in the settlement were built with permanent construction materials, such as stone. According to Assaad (1998), with the establishment of the Coptic Church in the community that same year, people began to feel more secure about their occupation of the land and began to use more permanent materials in the construction of their homes. By 1981, only 19% of the houses were still tin shacks, whilst others were made of stone or brick, but only 7 or 8 have concrete foundations.

Even before the launch of the 1980s World Bank funded Urban Development Project, and despite a lack of legal tenure, expectations of government-sponsored urban development encouraged the *Zabaleen* to invest on a self-help basis in improving housing quality. As shown in Table 3, housing quality indicators had improved substantially by 1993. By then, tin shacks, which were once predominant, had largely disappeared and were replaced by reinforced concrete building structures and brick walls. More than half the housing stock were now one-storey structures, with one-third being two-storey structures. The prevalence of two-storey buildings with pig sheds (*zeriba*) indicates a trend towards spatial separation of living zones from pig rearing and waste sorting areas, this being a major public health improvement provided by the new housing layouts. Previously, most household activities (sorting garbage, cooking, eating, sleeping,) were carried out in the main courtyard by the entrance of the house. Whilst the ground floor in the new houses was designated for waste sorting and

Table 3  
Measures of housing quality—1993

Dwelling characteristic	Percent of houses	Dwellings' facilities	Percent of houses
Type of roof		Water provision	
Reinforced concrete	81	Access to nearby water source	85
Tin	12	Tap water	<66
Wood	7	Itinerant vendors	15
Bamboo	1	Sewerage provision	
Type of floor		Sewer connection	41
Cement	36	Septic tank	39
Tile	46	Dump waste water in street, zeriba or wasteland	20
Earth	18	Toilet in house	72
Combination of reinforced concrete roof & cement or tile floor	72		
Type of walls			
Brick or reinforced concrete columns	82		
Load-bearing walls	18		
Separate area for cooking (kitchen)	64		

Source: Assaad (1998, Household Sample Survey—1993).

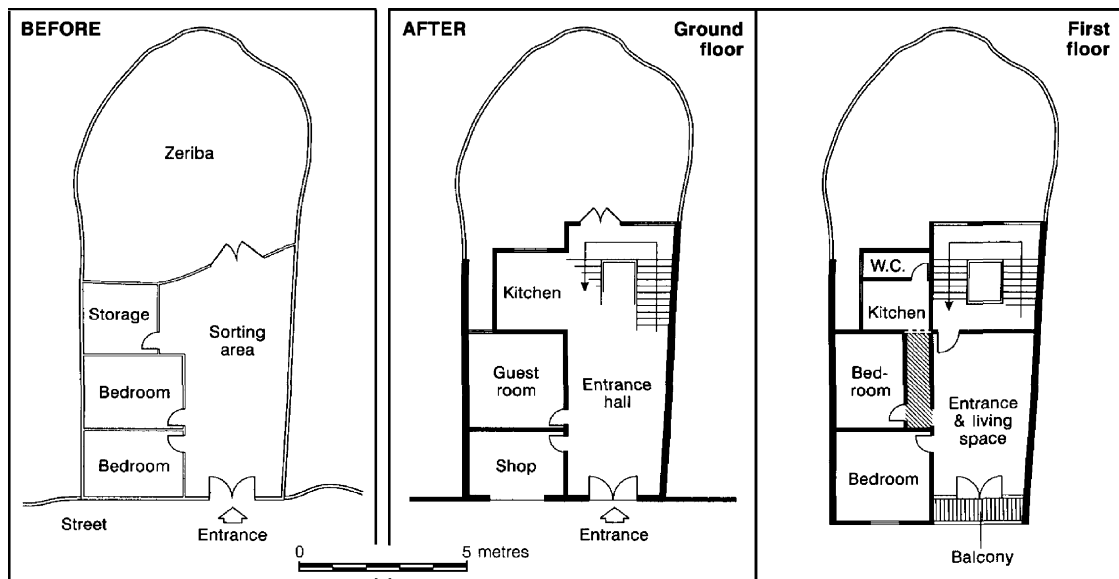


Fig. 3. Example of an upgraded Zabaleen house. Source: Environmental Quality International (1997).

for the storage of recyclable materials, living quarters were generally located in the second floor. The pig sheds (*zeriba*) are now built adjoining the sorting area at the rear of the house (see Fig. 3).

Initially, contractors from outside the settlement undertook all building and construction activities. With the increase in construction, some individuals in the settlement started their own contracting businesses with the help of the local NGO, EQI, which was eventually awarded the majority of building contracts in the area. Although this was not its initial objective, the housing project also created the need for a number of subsidiary services and industries. New enterprises were established and previously non-existent construction skills were acquired. Related businesses, such as carpentry, and the sale of construction materials and household appliances and goods also began to emerge (Assaad, 1998).

Housing Project loans extended over 5-year periods, and were sufficient for the construction of a single room and a toilet facility, built of reinforced concrete and brick, with an area of 12–13 m<sup>2</sup>. The housing project cost LE 700 (US \$ = LE 6.19) with the beneficiary contributing a further LE 250. Four loans were allowed per street, with a total amount of LE 375,000 in direct assistance. According to 1995 estimates, the *Zabaleen* have spent a total of LE 31 million on the construction of over 2000 new dwelling units since 1981 (Assaad, 1998). Direct assistance therefore amounted to no more than 1% of the total investments made in housing.<sup>1</sup> Such upgrading therefore represents a considerable capital investment, which could potentially be lost in any relocation of the *Zabaleen*. Would adequate or indeed any compensation be made available?

### *Change in land tenure practices*

Despite the fact that most *Zabaleen* do not have a legal title to the land they occupy, the perceived change in their security of tenure can be attributed to the introduction of infrastructure and other services into the community which had a direct impact on land value, making it more attractive for housing investment. Since 1981, the important unit of ownership in the settlement was not land, but a *zeriba* together with a collection route. Since newly settled migrants lacked financial resources, a partnership system developed amongst the *Zabaleen* that allowed residents to help finance the cost of setting up a *zeriba* for the new settlers, whilst getting a share of revenue from the sale of pig meat. Long-term purchasing relations were therefore established between pig dealers and *zeriba* owners.

Furthermore, the upgrading project implemented by the Cairo Governorate in the *Zabaleen* settlement included a land tenure component, with the intention to use the regulation of land tenure through the transfer of legal title to occupants, as the principal means of recovering the cost of introducing infrastructure. The cost of purchasing land would be made affordable by extending payments over a 30-year period at moderate interest rates. In 1984, as an outcome of a law to allow for the sale of public land to squatter communities, residents of the *Zabaleen* settlement were asked to register their claims to specific plots of land with the local authorities. The Governorate of Cairo invited the garbage collectors to legalize their claim to the land based on an estimate of its current value. While a few residents bought the land they occupied, most people considered the prices too high and refused to participate in the programme, demanding that the land should be sold for what it was worth at the time they first occupied it as squatters. According to Assaad (1998), over 91% of household heads interviewed in his 1993 sample survey claimed that they 'owned' the land on which their dwelling was built, either individually (79%) or in partnership (21%). Of those 'owners', 87% acquired the land by squatting on it, 7% bought it in the informal land market, and only 3% claimed to have purchased it legally.

### *Infrastructure development*

The World Bank funded an upgrading project aimed at introducing basic infrastructure as a means of improving living and housing conditions in these settlements. The philosophy was to introduce low-cost, affordable systems with cost recovery through the sale of land to its squatter occupants, and with long-term payments over 30 years. The most dramatic change occurred, however, with the introduction of 3-phase electricity, which allowed for the rapid spread of small recycling workshops, and was necessary for power provision for operating plastic granulation, rag pulling, and other machines that are now extensively used in the settlement (Myllylä, 2001, pp. 241–242). Moreover, being concerned about cost recovery and affordability, planners of the upgrading programme assumed that only public taps would be introduced in the settlement and that people would continue to transport water by donkey-drawn water cart (*fantaz*) to their houses, albeit from nearby locations. Planners also assumed that most houses would not be connected to a central sewage

<sup>1</sup>Assaad (1998) indicated that there was a direct attempt to improve housing in the settlement, conducted by Soeur Emmanuelle, a Catholic nun who worked with the *Zabaleen* assisted by the Beni Suef Coptic Orthodox Order of the Daughters of St. Mary. They initiated a number of health, education, and social welfare projects. Before 1982, she worked in the Ezbet El Nakhl *Zabaleen* settlement in northern Cairo. In 1984, Soeur Emmanuelle provided support to 5 poor families, enabling them to build one room each of predetermined size, shape and specifications. She then requested EQI to design model units that could be used to expand the scope of this activity so as to include as many participants as possible. A modified layout was designed to separate living areas from the *zeriba* and the garbage sorting space.

system but would use pit latrines and public toilet facilities, as officials planned for sewerage lines only along the major streets. Designs that included expensive pumping stations were avoided, preventing sewage lines from being extended to some parts of the settlement. Consequently residents hired contractors to make illegal connections to their houses from main water supply lines and from sewage system networks. The failure to anticipate these technically illegal self-help measures in the design of the system has led to frequent leakages and damages in the pipes, resulting in recurrent problems with low water pressure and overflowing sewage. Additionally, the establishment of the composting plant has greatly improved the situation, limiting the amount of dry organic wastes which contributed to fire hazards, toxic fumes, unsanitary conditions, and which restricted road accessibility.

It is important to contrast this 1980s and 1990s improvements and upgrading experience with the current 2000–2004 changes involving international companies and relocation. Earlier World Bank and EQI programmes involved the *Zabaleen* themselves or their organizations and relevant NGOs. Current programmes appear to ignore them in large part. Top-down procedures are replacing grassroots approaches.

### **The privatization of waste management systems and the relocation of the *Zabaleen*'s recycling activities**

Over the course of 5 decades the *Zabaleen* have created what is arguably one of the world's most efficient resource recovery systems. Yet the continuation of this intricate relationship between community, environment, and livelihood is far from assured. The *Zabaleen*'s partners from the private sector, experts, donor agencies, and alternative trading organizations, have proposed national-level strategies of solid-waste management, which would institutionalize the know-how of the *Zabaleen*'s recycling experience. The *Zabaleen*'s small scale, family owned businesses of door-to-door collection and recycling have been officially perceived as lacking modern equipment and hygienic practices. Instead, the municipalities have regarded more favourably the technology-intensive multi-national waste management corporations, with a growing trend towards the privatization of solid-waste services by contracting international firms. Because the authorities do not intend to compensate them for these changes, many *Zabaleen* would be forced out of business, while others would reduce their services. Some would be forced to discard non-recyclable materials as they head to distant new locations. The authorities have then stepped in and contended that the entire garbage collection sector is operating inefficiently, and have put up for auction the right to service entire neighborhoods. This created an opportunity for private-sector companies or multi-national firms, so threatening the socio-economic sustainability of the *Zabaleen* community. Consequently, the *Zabaleen* could lose their access to the environmental assets, i.e. the garbage, which they have converted into economic and social assets. Such a privatization approach fails to allow people to build incrementally on technologically appropriate indigenous patterns of living. The *Zabaleen* experience demonstrates the strength and vitality of community knowledge as a resource for building environmental, financial, and community-based assets and should not be discarded as worthless and out-of-date. This situation has led the authorities to pursue a policy of moving the *Zabaleen* activities further out of the city, claiming that this will turn *Zabaleen* neighborhoods into cleaner living environments while still allowing the waste sorting, recovering, trading, and recycling to occur. But such relocation plans will increase the *Zabaleen*'s travelling distance and the cost of services delivered to residential and commercial places, thus creating new risks for the sustainability of the *Zabaleen*'s livelihood.

Within the current study an investigation was carried out of recently launched privatization plans for local solid-waste management in Cairo, and of local attitudes towards its effects on the recycling economy and urban settlement system of the garbage collectors communities located at Muqattam. Archival research was based on official statements and public reaction to the project proposal and was compiled from updated news and analytical articles about recent privatization schemes published in the *al-Akhbar* and *al-Ahram* newspapers. Reference is made to reports by local NGOs who were involved with the Muqattam *Zabaleen* community, such as CID, EQI and APE.

The empirical study adopts a qualitative analysis employing ethnographic techniques of informal discussions with secondary stakeholder agencies (Cairo waste management municipality officials, local authority planners, NGOs activists such as the APE). In addition to informal discussions with various *wahyia* people (non-residents within the settlement), a field survey was administered with the primary stakeholder

group, the garbage collectors, involving in-depth interviews with poor householders and with community leaders in the Muqattam *Zabaleen* settlement.

The present study will therefore employ a stakeholders approach based on local people's reactions on the one hand and technical views on the other. Similar groups of individual and organizational stakeholders were identified by Ahmed and Ali (2004, pp. 469–471) in their study of solid-waste management in Indian and Bangladeshi cities. "Stakeholders are the actors with an interest in a common problem or issue and include all individuals, groups or organizations directly influenced by the actions others take to solve a problem." (Gray, 1989, p. 5). Accordingly, the qualitative survey included in-depth interviews with primary stakeholders constituting 40 local garbage collectors (*Zabaleen* heads of households) and 5 community leaders (the *Gammiyya*'s representatives). The sample of primary stakeholders was chosen in 2 stages: selection of stakeholder categories followed by the selection of representatives from each category. Stakeholder categories were identified through a review of documents and semi-structured interviews with key project representatives and officials from government organizations (see Table 5—Stakeholder Matrix).

### *Zabaleen's general attitudes towards Muqattam settlement*

Initially, interviews with respondents (January–February 2004) have indicated a need for additional urban intervention and a major upgrading programme, as a result of the lack of sufficient public services and infrastructure and of overcrowding which was attributed to the recent in-migration of rural population. This situation was compounded by the presence of a decaying housing stock, threatened by bad maintenance and environmental degradation. Respondents expressed their anxiety with the settlement's increased traffic and narrow unpaved roads inside the settlement. Whilst an inadequate sewage system threatened some areas with flooding, the inefficient disposal of unusable wastes was regarded as a serious fire hazard.

Various environmental categories were mentioned by respondents as determinants of quality of life within the area. Householders have revealed various satisfaction levels with respect to public spaces, emphasizing the significance of realizing and maintaining multi-functional green areas for entertainment, socializing, animal rearing activities and cultural events. In addition, most respondents expressed their preferences for landscaping open space, for paving main streets and for reducing noise pollution. Special attention was given to semi-private and semi-public transitional areas, with the need for spatial demarcation from private gardens to public parks to provide safety and livability in the area. The maintenance of mixed and diverse land uses included multi-functional housing lay-outs, with residential, commercial and income generating recycling activities, is likely to provide sustainable socio-economic and cultural life. A diversity of architectural and urban elements in buildings and public spaces was mentioned with a need for landscaping features and street furniture. Despite skepticism towards the government's ability to deliver appropriate services, future urban improvements in the built environment were considered to be the state's responsibility, and included educational, medical, and recreational facilities as well as developing open spaces and children's playgrounds.

There was no inclination towards large-scale intervention schemes, however, but rather *Zabaleen* respondents opted for more spatial intimacy, openness on public spaces, and a good proportionality between height and width of streets and squares. Generally, respondents expressed the need for accessibility of vehicles (for emergencies) through the main service road and secondary streets. Environmental services such as water supply were considered inadequate in some areas, with many utilities and services being urgently needed. Reactions included scepticism about the government's ability to deliver appropriate services. In particular, respondents required an adequate sewage system, as the current system was regarded as deficient leading to damages to building structures, particularly since the 1993 rock collapse.

### *Current plans to privatize the waste disposal system and to relocate recycling activities to eastern Cairo*

Recently, the *Zabaleen* began losing their licenses when international waste management companies started taking over Cairo's waste collection routes. The Giza authorities have been delaying and blocking the issuing of new licences for the Giza *Zabaleen*, which were renewed annually. Consequently, hundreds of Giza's *Zabaleen* demonstrated while Cairo's *Zabaleen* in Muqattam threatened strike action (<http://weekly.ahram.org>). The city sold annual contracts for US\$50 million to 3 private companies, hoping to bring order to the

system now in place to dispose of 10,000 pounds of garbage produced by 16 million Cairo residents each day. The *Zabaleen* represent the traditional school of recycling against the larger international waste collection companies namely Enser (Spanish), FCC (Spanish), AMA (Italian), as well as the Egyptian Company for Garbage Collection (ECGC) who are starting to venture into Egypt to take advantage of a potentially profitable niche in the market (Ibrahim & Ibrahim, 2003, p. 101). The AMA company claims that it plans to hire and train about 2500 *Zabaleen* (<http://www.amcham.org>). Experience in Alexandria from 2002 onwards suggests otherwise however. There, the Onyx private waste disposal contractor has not taken on Alexandria's 1500 *Zabaleen* as workers and focuses on landfill disposal rather than recycling. Both systems exist in parallel. Many apartment residents support the *Zabaleen* and continue to pay them as well as paying Onyx (Moharram, 2001).

A year after the multi-nationals commenced operations in Cairo an uneasy truce has been declared with the *Zabaleen*. At least 3 of the 4 big companies have hired *Zabaleen* as subcontractors (Business Today Egypt, 2004). It appears that the companies realized that keeping the *Zabaleen* out of the system completely was not an option if they wanted to get the job of waste disposal done. Furthermore, because of the social stigma connected with being a garbage collector, the companies found it difficult to recruit staff. This included the *Zabaleen* who claim that they make 90% of their income from recycling the garbage rather than from the collection fee. So, the foreign companies have started hiring the *Zabaleen* as subcontractors paying them LE 0.85 for each apartment from which they collect garbage. While less than their previous collection fee of LE 3 this new arrangement does give them access to garbage for recycling.

More significantly, to improve living conditions for the people of Muqattam and neighbouring communities like Manshiet Nasser, the Cairo Governorate decided to move sections of the *Zabaleen* operations (garbage recycling procedures, animal rearing activities) 25 km away to a 50-feddan plot in the Eastern Qattamiya desert (towards New Cairo City). Furthermore, the Ministry of Environment prefers the more extreme solution of relocating the *Zabaleen* communities themselves to newly planned settlements in Eastern Cairo as part of the Rehabilitation and Upgrading of the Manshiet Nasser Informal Settlement (Sabbour Associates, 1982; Volpi, 1996, p. 38). Interestingly, this suggested resettlement site is the same location where other government plans have sought to relocate both activities and people from Old Cairo (Sutton & Fahmi, 2002a) and from the Cities of the Dead (Sutton & Fahmi, 2002b). There are suggestions recently of a compromise whereby the residents could stay in Muqattam as long as their recycling activities are relocated to Qattameya. This could have a disastrous impact on *Zabaleen* livelihoods. So negotiations now focus on moving only the pig rearing activities leaving other recycling activities at Muqattam (<http://www.unhabitat>, 2004) where the APE have established a small-scale recycling plant within the area.

As indicated by the Ministry of Housing, Utilities and Urban Communities (MHUUC) and GOPP (General Organisation for Physical Planning) officials, the privatization of waste disposal and relocation of garbage collectors' recycling operations and the related eviction of the *Zabaleen* community, is supported by the Rehabilitation and Upgrading Programme of the Manshiet Nasser Informal Settlement which aims to improve the living environment of more than 500,000 inhabitants (Sabbour Associates, 1982). The project was initially proposed in 1982 and was later developed to incorporate the relocation of a percentage of the inhabitants into Eastern Cairo's desert settlement of Qattamiya (part of New Cairo City). The resettlement process, which consists of 9 phases, aims to provide a total of 70,000 housing units together with public services and amenities.

Official proposals by MHUUC state that,

the new settlements will be equipped with complete piped networks of water supply and sanitation, roads network, open space, vocational training and health care centres, libraries, schools, phone service network, and environment friendly crafts workshops. Residents will be provided with a soft loan, 90 percent of which is required to be paid over 40 years giving the residents a sense of ownership. The project is based on participatory socio-economic survey and mechanisms of transparent dialogue with local inhabitants in both the planning and management processes.

Nevertheless, despite official claims, the initiative has shown no co-ordination amongst government agencies, the *Gammiyya*, and NGOs. This is demonstrated in the attitudes expressed by primary stakeholders

towards the privatization of the waste management system and the relocation of recycling activities and the likely eviction of the *Zabaleen* community. This is covered in the following section.

### **Stakeholders' attitudes towards the privatization of waste management and the relocation plans for recycling activities**

#### *Primary stakeholders*

##### *Low-income garbage collectors—Zabaleen*

The study survey revealed that there was a considerable number of low-income people, residing within the settlement area, who were threatened with being forcibly moved from their houses as a result of future clearing procedures within the Muqattam mountain area. Resistance to the planned eviction scheme was expressed by two-thirds of the interviewed local residents, with women and elderly members of the community expressing more anxiety, as compared to younger age groups between 15 and 39, in relation to their inability to find and/or afford an immediate alternative residence.

Other respondents pinpointed security of tenure as a problem as they often had no official documents to prove their ownership of buildings, thus facing possible eviction with minimal compensation. Nevertheless, the issue of compensation was raised in terms of who would be eligible, with questions being posed of whether there would be enough replacement housing, where it would be located and would it be accessible to employment and to services such as education and health centres. Nevertheless, high-income community leaders expressed their intentions of moving to the adjacent informal Manshiet Nasser settlement. Also, a few low-income garbage collectors started squatting within the Eastern Cemetery tombs and shanty town buildings, in order to accommodate locally their increasingly large households (Sutton & Fahmi, 2002b).

The situation was more stressful for those low-income garbage collectors who have set up small-scale recycling enterprises in the area, as they feared losing their source of livelihood and traditional economic activity. They were reluctant to agree to the local authority's relocation plans and to 'regularizing location of their recycling enterprises in the new areas'. Such a regularization process usually involves a complex procedure full of bureaucratic delays and quite considerable expenses. They sought assistance and legal advice from local NGOs in obtaining a stay order from the courts to halt the relocation of their recycling industry. They called for a sustained campaign in support of their case, otherwise they anticipate that they will be the first to be evicted from the *Zabaleen* settlements in Muqattam.

I will not work anymore if this happens. I won't be able to afford to. If I am forced to move my work to the desert and leave my wife and daughters to work 20 km away from home, then I will stop collecting Cairo's rubbish... I start working at 4 am, driving into Cairo, to collect household waste back to Muqattam settlement. Women then engage in the recycling process, sorting out the waste, picking out items (plastic, wood, glass and paper) that can be recycled and sold. (A 31-year old resident who has lived in Muqattam his entire life)

Despite the relatively degraded residential environmental conditions a Muqattam resident, says:

My family earns about LE 500 a month, which is more than enough... This is the only job we can do, and we want to do it. But moving to Qatameya will cost more in transportation. I will have to spend money to protect the area given to me, and my wife and daughters will have to spend all their days in the desert rather than at home. This has been our home for many years now. We have grown up, worked and raised families here. We want things to change for the better, for systems to improve, for new equipment and technologies to be implemented.

One respondent stated that his family had gone through most of the changes the *Zabaleen* have experienced over the past 7 decades. Since being forced out of Imbaba 30 years ago, Muqattam has been his home.

We are strong people and we know what we want... We are willing to change to meet the needs of the authorities. But they decide to move us again, without giving us the chance to make things better. It is not fair and nobody in the community supports it.

Another respondent, 29 years old and a father of 2 says:

We are proud of what we do and how we do it. If it was not for us, how much more rubbish do you think there would be in the city? The future does not look good. It seems the decision has already been made. There are not many alternatives for us. But I don't want to move anymore. We have already been forced to move and change many times in the past. What will happen in another 30 years? Cairo may continue to grow and then we will again be next to another community and forced to move once more. When will this end?

Yet, despite the benefits promised under foreign management, and while company sources talk about salaries ranging between LE 300 and LE 450 per month, some *Zabaleen* claim that salaries on offer are actually much lower. So, the foreign companies have started hiring the *Zabaleen* as subcontractors paying them LE 0.85 for each apartment from which they collect garbage. While less than their previous collection fee of LE 3 this new arrangement gives them access to garbage for recycling. 'I was offered LE 150 per month, when I was making between LE 300 and LE 400 before' said a 43-year-old Muqattam resident. Similar figures were given by a garbage collector and sorter with 8 children who claimed to make 10 Egyptian pounds a day compared with the 5 pounds a day offered by the foreign contractors (<http://www.copts.net>).

#### *Community leaders and the Muqattam Garbage Collectors Association (Gammiyya)*

Local community leaders' dissatisfaction with proposed resettlement plans was mainly attributed to their lack of involvement with the privatization of the waste management project. Most respondents mentioned that one direct effect of the privatization programme and resettlement scheme was the disruption of economic structure, social ties and community networks. A leading community representative of the Muqattam Garbage Collectors Association (*Gammiyya*) was anxious about the fate of garbage collectors and pig rearers, as the livelihoods of thousands of men, women and children are dependent on garbage collection, separation and manual recycling. These are highly labour-intensive activities in which whole families take part. The *Zabaleen* communities in Muqattam are already threatened with relocation, but having to compete with the government over garbage means finding employment for thousands of people whose only skills are garbage related.

Already, plans to relocate small-scale recycling activities have caused anxiety over the future. Moreover, the political influence of community leaders and strong social relations proved instrumental in developing empowerment and awareness of the objectives of the privatization process. Some community leaders were initially interested in the project and its potential for creating urban development activities. When they realized that this was not going to happen, many opposed the privatization plans and the consequent relocation of recycling activities. Interviewed community leaders seemed well aware of what the authorities have been proposing and appreciated that the government's approach was tentative in seeking to test local opinion in advance of definitive action. Some community leaders have suggested a 6-month long trial to ascertain the possible damage to the local economy as a result of relocation of recycling activities. However, such a suggestion was later opposed by most respondents.

In response to recent privatization plans, a poverty alleviation programme was proposed by the Muqattam Garbage Collectors Association (*Gammiyya*) which aims to overcome the dependency syndrome on NGOs and on foreign funding within the community. The proposal involves income generation, job creation and vocational training based on household solid-waste collection, disposal and recovery activities. Such a programme represents a concerted effort by actors from the private for profit and privately non-profit sectors on behalf of the *Zabaleen* garbage collectors. The re-cycling activities, engaging small-scale enterprises, focus on, inter alia, the production of affordable consumer goods that are much appreciated by low-income groups. Revenues generated have been re-invested in housing, infrastructure and basic services as well as new business development, including transport. It also aims to inform, educate and convince official government policy and practice so as to reverse their decision to evict and move the *Zabaleen*. It supports and implements a neighbourhood upgrading plan involving the planning of streets, construction of a school, outpatient clinic, park, children's club and credit programs. It is upgrading the garbage collection vehicles from donkey-pulled carts to small pick-up trucks, provides credit for small and micro-enterprise development, holds literacy classes, provides infrastructure (water, sewage and power lines), improves construction by painting the facades



of buildings, plants trees, mobilizes the community to participate. Such initiative aims to upgrade health conditions after the construction of the dispensary and to create job opportunities, producing home floor mats and producing recycling machines.

## Secondary stakeholders

### *Local non-governmental organizations*

#### *Community and Institutional Development (CID)*

The CID expressed reservations concerning the impact of privatization of garbage services on the Muqattam *Zabaleen* community and the role played by international waste collection companies. The CID is a strong opponent to the decision to force the 27,000 Muqattam workers to relocate their recycling operations as the following critical statement makes clear:

The *Zabaleen* are facing a real crisis. There is no doubt about that. For all the reasons they are [giving], this decision is one which is not well thought out. To move will not be financially sustainable for them. It will add too many hardships to their lives. Not enough is being done to look for a compromise to solve this problem. If they were given the chance to use new technologies in Muqattam for dealing with the waste, all the problems could be resolved. The authorities need to look at the effects of their decision on income, employment, economic growth, trade, manufacturing and the environment. Other alternatives, such as the introduction of new recycling technology, need to be looked at. Separating waste at home could be a way to ease the burden off the *Zabaleen*'s shoulders. It would mean they would deal with less organic waste.... But the fact is they are performing a task which is impossible for others to carry out in this city for so little. I hope someone will understand soon. I would like to see the operations of the *Zabaleen* formalized and given a fair chance to use other technologies. They deserve to be valued for their work and allowed to lead a decent life. The idea of moving them to the desert and squeezing them further out of their trade is not right. ... These contracts are costing the city big money. Why not spend just 10% of such a budget to upgrade the *Zabaleen* system? It's a catastrophe. Overnight, 50,000 people could be out of a job. They have built so much with so little.' (Interview with CID, February 2004)

While the CID appreciates the government's desire to keep the city clean, the authorities should also protect the *Zabaleen*. 'The government should have given each partner a role where they are most competent. According to the contract, the multi-nationals own the garbage they collect. A better alternative would have been to subcontract the *Zabaleen* to implement a 'segregation system,' dividing organic and non-organic waste—a scheme that was successfully tested in 2 Cairo neighborhoods in 1996. Medical, industrial waste and landfill management, meanwhile, could be handled by the multi-nationals.'

#### *Association for the Protection of the Environment (APE)*

Since 1984, the APE has been working with the *Zabaleen* integrating literacy and health services with income generating activities related to paper recycling units (Ford, 2003), neighbourhood upgrading schemes, an organic composting plant, a children's club and a nursery (APE, 1993a, b; Myllylä, 2001, pp. 236–238). Consequently, the community acquired an integrated facility with recycling, educational, training, health and business services, improved infrastructure and schools plus the establishment of the Association for Garbage Collectors. Unexpectedly, Myllylä (2001, p. 243) suggests a degree of antagonism between the APE and the *Gammiyya* which is criticized as representing only the privileged families and as failing to promote the interests of the poorest and of women. Such conflict was further aggravated when the AEP asserted that separating people's homes from the rubbish and animals could improve environmental conditions within the settlement. The AEP thus expressed support for the plan to transfer waste services to Qattamiya by the end of 2004.

It's the best idea available. There is no reason why it won't work. I don't know why people are complaining. It will improve living conditions for everyone, especially women. They can take pride in making homes they feel comfortable enough to have people visit. I understand there is opposition now, but I'm sure in time the people of Muqattam will understand the benefits the government's move will have for them. (APE, 1993b)

## Official view

### *Cairo Cleaning and Beautification Authority (CCBA)*

According to the CCBA, concern about the physical health of the *Zabaleen* has been cited as one of the reasons for upgrading the current waste management system. Indigenous methods of garbage collection are widely regarded as unhygienic, with the new system separately collecting industrial, medical and household waste.

There should be some organisation to collect and get rid of the trash safely. The *Zabaleen* system is dangerous to public health.

CCBA officials are optimistic about the prospects of resolving problems with the setting up of new recycling facilities (between 10 and 12 will be built in Cairo's suburban fringes), whilst the government will be accepting offers from investors and businessmen interested in the establishment of such enterprises. The Cairo governor announced that the *Zabaleen* could bid for the contract for the southern sector of the city, and is encouraging foreign companies to hire them as garbage collectors, terminating their recycling projects and social programmes. Whilst the *Zabaleen* have previously recycled some 80% of the waste collected, foreign companies are required to recycle only 20% with the rest going into a new landfill (<http://www.copts.net>). In CCBA's vision, the *Zabaleen* would continue collecting garbage, but they would be working for foreign companies—FCC and Urbaser, Enser (Spanish), AMA (Italian)—which will also be responsible for street sweeping and the placement of garbage bins. According to CCBA, foreign bidders were chosen for the contract because of their 'superior know-how.' The CCBA, however, seems to be neglecting the scale aspect of the proposed changes namely that the large companies cannot collect from narrow streets as their mechanized equipment is too large scale. The companies require residents to take their garbage to central collection points whereas the *Zabaleen* were able to collect waste from individual houses even if located in narrow alleyways.

We already have a factory operating in the Al-Salam district (north western fringes) and are in process of building a LE 4 million factory that will turn 50 tons of garbage into compost daily. Three factories are under construction at Al-Qattamiya (Eastern Cairo new city) on an area of 25 feddans that has been allocated for them. Cairo's garbage, being particularly 'rich,' provides great potential for the production of high quality compost. 'Rather than burying the waste underground as we do now, we will be putting it to profitable use while also cleaning up the streets of Cairo. (Interview with CCBA, February 2004)

However, inhabitants, especially those living in slums and shanty towns, complain more about their municipalities' failure to collect garbage from their homes than about where the government chooses to dispose of the waste. The CCBA argues that, since the facilities will be run by the municipalities, this will act as an incentive for them to collect the garbage. However, Cairo's residents will be expected to pay for privatized garbage collection through a monthly bill based on their electricity bill (<http://weekly.ahram.org>). Objections to this method of charging can be expected and, indeed, have already occurred in Alexandria where the privatization of garbage collection is more advanced than in the capital.

### *Egyptian Environmental Affairs Agency (EEAA)*

The head of the waste-management programme at the Egyptian Environmental Affairs Agency (EEAA), advocates turning garbage into compost. However, he stresses that the recycling facilities are important because of the need to maintain a clean environment, rather than for making money. If the recycling facilities are aimed at maximizing profits, then they are unlikely to be interested in the garbage of the poor. He cites examples of recycling facilities that had to be closed down for reasons of inadequate staff training, and insufficient maintenance of machinery.

The idea that such factories are a viable investment depends on how you calculate it (the return); if you don't take into account the depreciation value, they are considered profitable, but if you do, they are not. They could generate a profit if a tipping fee is introduced, so that the municipality pays these factories for

taking in the garbage. There are also other problems. Sixty per cent of the garbage can be turned into compost, but the remaining 40 per cent cannot. This will be a particularly acute problem when facilities are set up in Upper Egypt. The level of industrialization in this part of the country is not very high. Where are they going to find the markets for the recycled products, such as plastic, metal and paper? (Interview with the EEAA, February 2004)

*International waste management companies*

Representatives from AMA (the company responsible for Cairo North, an area covering 2 million inhabitants and approximately 400,000 households) claim that the company plans to hire and train about 2500 *Zabaleen*, whilst providing them with uniforms, appropriate footwear and regular medical check-ups.

It is our strategy to employ the local *Zabaleen*. We want to avoid conflict, and this satisfies the social component of our contract. We want to promote them to be up to international standards. Recyclers will still be able to go to landfills and take what they want, before the garbage is buried. In the landfill, you’ll get hotel waste which might be 100 percent recyclable, covered with road sweep, from which very little can be recovered. So I think the average recovery rate might be 50 percent. (Interview with AMA, February 2004)

**Analysis of stakeholder views**

In focus group meetings, stakeholders were able to express their future expectations concerning the privatization plans (Table 4). The extent of respondents’ satisfaction with, and attitudes towards the project were subjectively outlined, with their expectations ranging between how the area was a few years ago and the vision of what the area would be like in the future. Table 5 reveals significant variations amongst respondents, according to the project’s impact and influence on different stakeholders. Stakeholders’ attitudes and evaluations of the project are dependent on such factors as socio-economic characteristics, political and cultural affiliation, institutional capacity, and future expectations from the built environment.

Tables 5a and b show stakeholders’ expectations and attitudes. These are dependent on the relative significance of the project and on its impact on the primary and secondary stakeholders. Based on residency within the Muqattam settlement further classification was made to subdivide primary stakeholders (Table 5). The first subgroup includes those residents most affected by the relocation plans, namely the *Zabaleen*, who

Table 4  
Future expectations provided by both primary and secondary stakeholders

Housing and public facilities	Community development initiatives
Improvement of existing housing stock within the area	Establishment of small-scale business enterprises (environmental awareness, waste recycling activities urban allotments, vocational training centres)
Development of flexible new housing stock catering for different needs (e.g. low–medium income)	Mobilization of community action groups and local participatory tools to maintain the area
Maintenance of part of old housing stock for low-income garbage collectors whilst developing long term plans for relocation of middle and high-income groups to new settlements	Consideration of <i>Zabaleen</i> settlement as an environmentally innovative community rather than a stigmatized ghettoized enclave
Involvement of NGOs and housing corporations in short-term strategies for improving public spaces, open landscape areas, and public facilities	Creation of public–private partnerships for provision of more funding for vocational training—young enterprise centre
	Encouragement of recycling experimentation projects (funded by government and sponsored by private partners) as a pilot for future urban innovation (environmental city farms/urban agriculture)

Based on field survey, January–February, 2004.

Table 5  
Stakeholder analysis—privatization of waste management system and relocation of recycling activities

Stakeholder	Interests/expectations as expressed by respondents during in-depth interviews	Potential impact of project <sup>a</sup> identified by respondents	Relative significance <sup>b</sup>
(a) Primary stakeholders			
Local low income garbage collectors (house owners/tenants)	Improved opportunity for jobs	(–)	1
	Infrastructural provision	(–)	
	Housing/security of tenure and affordable rents	(–)	
	Clean environment	(+ / –)	
	Income generation activities	(–)	
	Sustainability of recycling economy	(–)	
	Improved job opportunities	(+)	
Non-residents <i>wahiya</i> (local contractors)	Safe and healthy environment	(+)	2
	Participation in government programmes	(+ / –)	
	Investment opportunities	(+)	
	Service accessibility	(– / +)	
	Increased infrastructural facilities	(+ / –)	
	Clean, well-kept streets	(+)	
	Community leaders ( <i>Gammiyya</i> representatives)	Community livelihood	
Service facilities, i.e. provision within community	(+ / –)		
Garbage disposal facilities within community	(–)		
Recycling facilities organization within community	(–)		
Local Cairene residents	Improved environmental conditions within community	(+)	2
	Improved work opportunities for local community	(– / +)	
	Clean environment and health services for local community	(+)	
	Improved waste management services within Cairo	(– / +)	
	Increased Recycling resources	(–)	
(b) Secondary stakeholders			
Political area representatives	Getting rid of slums and environmentally degraded areas	(+)	3
	Control over resources	(+)	
	Public support	(+)	
Cairo Cleaning and Beautification Authority (CCBA)	Job opportunities	(+)	2
	Access to funds	(+ / –)	
	Publicity and political achievement	(+ / –)	
	Environmental Improvement and protection	(+)	
Egyptian Environmental Affairs Agency (EEAA)	Better Service provision	(+)	2
	Control over funds and planning objectives	(+)	
	Political recognition	(+)	
	Expansion of project to surrounding areas	(+ / –)	

Table 5 (continued)

Stakeholder	Interests/expectations as expressed by respondents during in-depth interviews	Potential impact of project <sup>a</sup> identified by respondents	Relative significance <sup>b</sup>
NGOs association for the protection of the environment (APE)	Technical achievement	(+)	2
	Effective use of resources and improved environmental consideration	(+)	
	Institutional learning	(+/-)	
	Achieving Environmental awareness objectives	(+)	
	Generation of additional funds	(+/-)	
	Developing a credible programme	(+)	
	Coordinated action	(+/-)	
NGOs Community and Institutional Development (CID)	Greater involvement of NGOs	(-/+)	2
	Education opportunities	(+)	
	Improved job opportunities and economic activities	(-)	
	Security of tenure	(-)	
	Additional public facilities	(+/-)	
	Increased public awareness	(+)	
	Networking and Cooperating with local community	(+)	
Entrepreneurs (ECGC)/International waste management companies—Enser, FCC, AMAC	Liaisoning with local municipality	(-)	3
	Increased business opportunities	(+)	
	Garbage-free area	(+)	
	Pollution-free environment	(+)	
	Ownership of project	(-/+)	
	Increased recycling facilities	(+)	

Based on field survey, January–February 2004 (table based on [Burton's \(1999\)](#) methodology).

<sup>a</sup>Potential impact of project according to respondents: (-) negative impact/negative response, (+) positive impact/positive response, (+/-) more likely to have positive impact than negative, (-/+) more likely to have negative impact than positive.

<sup>b</sup>Relative significance of overall project in meeting respondents' needs: 1, highest significance, 2, intermediate significance, 3, least significance.

were either tenants or house owners. Their negative attitudes towards the government's plans focused on the expected loss of their recycling economy and associated activities and on the threat of eviction and lack of security of tenure amongst house and *zeriba* owners. Despite also being resident in the Muqattam area, community leaders expressed less concern with the physical dimension of the relocation plans while emphasizing the consequences of economic loss on the community's livelihood and cohesion. They exhibited upward social mobility which enables them to seek housing in the adjacent district of Manhiat Nasser and in nearby central districts of Cairo.

The second subgroup were mainly non-residents within the area who were thus unaffected by relocation plans, but rather with the waste restructuring scheme. The *wahya* (local contractors) expressed a pragmatic view in favour of the government's plans in terms of environmental improvement and job creation. Such a view is based on the *wahya*'s future expectations of being included in partnership with the multi-national companies in subcontracting solid-waste distribution and in staff recruitment. Whilst initially expressing optimism in relation to environmental improvements within their neighbourhoods, following the restructuring of solid-waste management, local Cairene householders were primarily sceptical about the direct economic benefits they might gain from the project. Instead, they preferred to continue dealing directly with the garbage collectors, rejecting government's plans to pay extra fees for services provided by multi-national companies.

Generally, secondary stakeholders' views coincided with primary stakeholder non-residents' emphasis on the broader environmental and political aspects of the project. Table 5 identifies another 2 subgroups

Table 6  
List of main stakeholders and their priorities

	Subgroups	Main priority
Primary stakeholders		
Residents	Garbage collectors Community leaders	Recycling–housing Community livelihood and cohesion
Non-residents	<i>Wahya</i> Local Cairene householders	Job opportunities (subcontracting) Garbage collection—no extra fees
Secondary stakeholders		
Less local involvement in area	CCBA/political MPs EEAA/multinational companies	Political achievement Technical improvement
More local involvement in area	APE CID	Environmental awareness Community empowering and networking

according to local grass root involvement within the area. Firstly, there were political representatives and the CCBA who showed less regard to local garbage collectors' interests, and were more concerned with the political achievement in terms of improving Cairo's environment and upgrading waste management services together with economic gains as a result of new recycling business. In addition, the EEAA and the multinational companies stressed the technical aspect of the project with respect to the effective use of recycling resources whilst increasing environmental quality standards. The second subgroup included both local NGOs (APE and CID) who anticipated the positive impact of the project in developing environmental awareness and in creating community networking. Nevertheless, the CID was more critical of the project's consequences on the *Zabaleen* community regarding the loss of their economic base and the threat to security of tenure within the settlement. In contrast, the APE was more strategically aware of the wider socio-political and economic significance of the project beyond the specificity of the *Zabaleen's* case. Table 6 attempts to summarize these points.

### An assessment of the relocation plan

Community leaders emphasized 4 main failings of the proposed relocation programme—no warning, no consultation, no compensation and no provision for resettlement. These all contribute to the lack of any attempt to develop solutions, which would minimize the impact of the evictions and the disruption caused to those who have to move. The government's short-term proposals for the relocation of the *Zabaleen* recycling activities will, nevertheless, lead to long-term eviction of garbage collectors as they are forced, under economic hardship, to move from their homes in Muqattam, in which they have lived for decades and in which they have often invested a considerable proportion of their income over the years. Where provision is made for resettlement, this is almost always at a distant site (eastern settlement of Qattamiya in New Cairo City) where the people are expected to build, once again, their homes but on land currently with little or no provision for infrastructure and services. Those evicted would rarely receive any financial support for rebuilding. The land site on which they are to be relocated is also very often of poor quality. Needless to say, all of this will be done in the name of the government's concern for the welfare of the 'less favoured' families, with legislation to protect 'the environment' as a justification.

Such long-term 'imposed' evictions within the *Zabaleen* settlement reflect the differences in political power within the society, where economic interests resort to the law or to municipal authorities who have the power to evict people supposedly 'in the public good'. In this case, local governments will play a major role in initiating the evictions, where future supply of land for housing in Muqattam area is constrained and the cost of the cheapest house in the new location artificially raised by inappropriate or inefficient bureaucratic controls. It is this combination of people with very limited incomes, and high housing and land prices which ensure that the cheapest legal accommodation is beyond their reach, thus forcing them to enter the illegal housing and land markets. The *Zabaleen* have a very weak legal position from which to fight eviction or at

least to negotiate concessions for time and support for moving and acquiring alternative accommodation and for compensation. Many low-income people within the *Zabaleen* settlement, facing the threat of eviction, point out how it is their cheap labour that underpins the city's economy, yet the city has no legal accommodation which they can afford. This fact is evident in the words of a female respondent, '...we contribute to the city's economy and support through our labour the very people who want us to move... why then are we pursued so persistently?' Or the words of a woman questioning the endless evictions which dispossessed the poor '....we do not claim much. We are not demanding free accommodation. We do not pretend that we are living like other Cairene middle-class. We wish to live in cheap housing. Why is it not allowed?'

Usually the government establishes 2 kinds of relocation sites: temporary shelters for displaced persons and resettlement sites for squatters. Conditions in the new sites are poor, without local employment opportunities, and with few services. Despite their initial denials concerning the future eviction of the local community, interviews with key government officials revealed their justification for such settlement schemes as being attributed to 'improving the environment' and 'providing the *Zabaleen* with safer and more sustainable settlements'. Such an authoritarian approach is more likely to result in the implementation of such plans with large-scale evictions together with a lack of dialogue with poor *Zabaleen* and their organizations. This lack of representation of their views within the government machinery has greatly reduced the possibility of successful opposition to official plans and of any negotiation of a compromise between the local authorities undertaking the redevelopment and those groups who are to be evicted. If no alternative accommodation is provided for those displaced, they have to find space in other cheap areas and thus increase overcrowding in districts such as the nearby Manshiet Nasser informal settlement and the Eastern Cemetery squatter area.

Despite safety concerns about construction procedures within the Muqattam area since the 1993 rock collapse, another undeclared justification for evictions is 'redevelopment'. This implies the use of the cleared land more intensively, so allowing developers to make very large profits redeveloping such sites, especially if they can avoid the cost of re-housing those evicted. Since the *Zabaleen* settlements lower the value of the surrounding land and its housing, and in a bid to 'beautify' Cairo and to maintain or enhance land values, developers may make large profits by doing nothing more than clearing the site and holding the empty land for property speculation. If *Zabaleen* settlements are judged to be illegal, even if they have been there for many decades, this is a convenient excuse to bulldoze them without compensation.

Nevertheless, the unwillingness or inability of government authorities to help increase the supply and reduce the cost of housing, and of land for housing, and to ensure the provision of infrastructure and services, have left such poor groups with no option but to accept housing that is inadequate, overcrowded, insecure and poorly located. The failure of the administration leaves the urban poor with no choice but to come up with its own solutions. Such poor communities have no access to public low-cost housing finance institutions, eventually having no alternative other than to rely on illegally occupying land or on acquiring illegal subdivisions as the only way of obtaining land on which they can develop their informal dwellings. This is also attributed to the fact that government 'low-cost' housing projects within the new Eastern desert Communities have delivered too little, since they often ended up in the hands of middle-class groups. Selected sites for relocation, such as Cairo's new Eastern desert settlement of Qattamiya, were too far from city centre and housing too costly for low-income households. The government did not consider the provision of services such as transport and water. Ironically, the government machinery set up to respond to the housing problems of the poor has in fact been used against them. This is so despite an earlier 1980s official policy, which sought to regularize (legalize) and upgrade *Zabaleen* areas.

Furthermore, the study survey within Muqattam settlement revealed the key role played by community leaders in organizing the struggle of poor *Zabaleen* for land on which they could build their homes, and for the right to manage their own settlements. Such complex political struggles that people are facing have included negotiations with government agencies, not only for shelter but also for the right to have their own democratic institutions in order to manage their settlements. Therefore there is a need for continuing community resistance, as manifested in terms of the alliances developing between low-income *Zabaleen* threatened with eviction and local NGOs and community development intermediaries. Such alliances can provide legal advice and help gain greater local and national support for the threatened communities who depend on the micro-enterprise recycling economy and who need to live in central locations to earn their livelihoods.

Accordingly, there is a need to strengthen the capacity of low-income *Zabaleen* groups to negotiate with local authorities and to reach agreement on partnerships between community organizations, local NGOs and municipalities to address poverty alleviation strategies in order to:

- improve access to the public services to which they have a right as citizens (schools, health services, emergency services and police protection);
- seek legal solutions and official recognition for low-income households living on land they have occupied illegally (either by transferring tenure to them or by providing alternative and acceptable sites which meet their needs and priorities);
- ensure that low-income households' homes and settlements have adequate provision for water supply, sanitation, drainage and garbage removal; and
- ensure greater flexibility in the application of building codes, infrastructure standards and site lay-out norms.

### Poverty alleviation housing initiatives

The survey revealed that the Muqattam *Zabaleen* community has given considerable significance to poverty alleviation initiatives in terms of housing improvements and basic services development. Nevertheless, during recent decades community based upgrading initiatives were carried out within the Muqattam *Zabaleen* settlement, with minimal public expenditure. However, recently launched privatization plans and the relocation of recycling activities have contributed to jeopardizing peoples' security of tenure and threaten to abandon urban infrastructural interventions (roads, water supply and waste water systems), institutional building, and community investments in housing improvement. Official interventions are threatening to disrupt completely a waste management recycling and recovery system which has provided the community with sustainable means of livelihood and has secured an adequate informal micro-enterprise economy within the settlement. Since the 1980s and 1990s major improvements in environmental quality within the settlement with respect to housing conditions, were mainly attributed to self-help initiatives and community resources. However, inadequate infrastructural services, particularly water supply and sewerage system, were attributed to limited allocated budgets, with no institutional connection between the government's sale of the land to squatter occupants and cost recovery for infrastructure development. Ironically, the survey identified the problem of disposing of unusable wastes.

The Garbage Collectors' Association (*Gammiyya*), emphasized the need to reduce the health burden, associated with poor-quality housing and lack of basic services. For most poor women and men within the community acquiring and developing their own home (usually through self-help or mutual aid) provides them not only with a healthy and secure base, but also with their most valuable and secure capital asset. Accordingly, a home of their own is important for providing low-income households with stability and security. This is especially important for households with children and for the female members of the household who take most responsibility for child rearing and household management. In addition it is essential to maintain and sustain niches for a diverse informal economy such as recycling micro-enterprises that could help to increase income or employment for low-income garbage collectors.

The paper recognizes the significance of initiatives that integrate savings and credit groups formed by low-income groups (mostly women) to improve housing and living conditions and basic services. Such initiatives challenge the conventional separation between the improvement of housing and living conditions as 'poverty alleviation' and support for income generation as 'poverty reduction', thought to be achievable only through increasing the real incomes of poor individuals or households.

Most of the poorest *Zabaleen* households have little or no possibility of finding resources needed for self-help construction, as the amount they can save is not enough to allow them to obtain the necessary credit to cover the cost of land purchase and to commission a local contractor. Many of the lowest-income households appear to have no savings capacity and thus no possibility of joining housing programmes that require savings. Some households, together with community-based organizations (*Gammiyya*) and NGOs, have managed to set up and sustain their own emergency credit programme which then developed into a savings scheme for micro-enterprise; housing improvement and building; installing some infrastructure; and setting up



and managing basic services (Anzorena et al., 1998). Savings groups provide a means to help low-income groups organize their demands and provide proof of their capacity to contribute towards solutions.

Poverty alleviation initiatives seek to encourage decision-making processes within organizations formed by low-income households with the aim at keeping down building costs through mutual self-help initiatives and free labour supply, through household savings groups and loans, through the construction of sewers/drains and the installation of piped water, with technical and organizational support from local NGOs. There is a need to provide the *Zabaleen* community with affordable housing options whilst empowering local households to effectively participate in decision making at an early stage of planned interventions, maintaining and enhancing their livelihood systems, whilst preserving their social capital, and sustaining the group's socio-economic development.

The current paper has nevertheless suggested the need to recognize the symbiosis between domestic and productive activities of the *Zabaleen*, which can provide an understanding of the significance of the home for such households and which could lead to more sensitive and supportive policy responses. Closely related is the significance of housing for *Zabaleen* micro-enterprise recycling activities. This situation is similar to rural models of production and consumption, with a strong emphasis on household subsistence, interlinked to kinship and social networks. The home for garbage collectors thereby becomes not merely a container of human life but an essential shelter for those life-sustaining productive activities as in rural areas, where home and workplace are frequently combined and intimately interrelated. Where the place of work is also the place of residence, group identities are reinforced, strengthened by residence patterns of clustering by kin and by place of origin. There are implicit value judgments suggesting a natural and appropriate separation of domestic and work tasks (Kellett & Tipple, 2000). Planning norms, enshrined in zoning laws, insist on the separation of manufacturing, retailing and commercial uses from residential areas.

## Conclusion

The study has identified the need for local government's support for community initiatives to develop small-scale recycling enterprises and income-generating activities for the *Zabaleen* threatened with relocation. This could be done through mutual self-help; and through soft loans, subsidies and technical support to improve, rebuild or expand their new homes. In the case of the *Zabaleen*'s proposed eviction, there is a need to tackle problems in the new settlements of inadequate provision for water supply, sanitation and drainage. Any reorganization of the collection and disposal of garbage ought to be in partnership with the different stakeholders from relocatees to community leaders, NGOs, local authorities and other agencies. Local NGOs with a strong commitment to participation would tend to keep costs down whilst avoiding the reinforcement of patronage and thus creating less dependency amongst relocated local communities.

Therefore, there is a necessity for an overall strategy that sets the *Zabaleen* community within the general framework of an Egyptian economy unable to create sufficient jobs and to provide affordable housing for a large proportion of its population. Yet, the dilemma of the *Zabaleen* community cannot be resolved without a transformation of the average Cairene's attitude towards these informal inhabitants. Long-established negative images remain despite the general academic rehabilitation of squatter settlements and their inhabitants (Potter, 1985; Turner, 1968). This is evident within the *Zabaleen* Muqattam area despite various developmental interventions. The socio-economic profile of the *Zabaleen* approximates to that of the poorer quarters of Greater Cairo, whilst there still remains much social stigma attached to a Muqattam *Zabaleen* address. As with the image of tomb dwellers and residents of the nearby cemeteries of the Cities of the Dead, the popular perception of the *Zabaleen* is still negative and pejorative (Sutton & Fahmi, 2002b). Therefore, both the uniqueness of the *Zabaleen* community and their comparability with dynamic squatter settlements elsewhere should be appreciated before plans are implemented to move the *Zabaleen* community out into new desert locations. Such a drastic relocation of *Zabaleen* recycling activities and the consequent resettlement of people threatens to meet likely failure given the authorities' apparent misunderstanding of the complexity of this multi-faceted society.

Kamel (2003, p. 6) has suggested several options for integrating the *Zabaleen* into the international companies' contracts. Transfer stations could be established where a major proportion of the non-organic waste could be recovered and directed to existing traders. The *Zabaleen* could continue to collect household

waste from high-income areas on a daily, door-to-door basis and then pass the residual waste on, after recycling, to the big companies. The *Zabaleen* could receive inorganic waste from the companies as input to their recycling businesses and they could contract for selected waste, such as paper from print shops, directly from the generators of such waste. Small community-based composting facilities could be established. The *Zabaleen* could pool their financial assets such as trucks and workshops. Further, their nationwide trading network in recycled waste could be connected to the formal sector of the solid-waste economy. In such ways the traditional informal *Zabaleen* system could be integrated into the new privatized large-scale waste collection system to the mutual benefit of both sides.

In this local–global confrontation the possible contribution of a Private–Public Partnership (PPP) can be mooted. However, one can wonder whether in Cairo the ‘private’ element of the PPP would include or exclude the *Zabaleen* or just the big private companies (Ahmed & Ali, 2004)? Would the new situation merely be one in which the *Zabaleen* work as waged labourers for the international companies? This would represent dependency rather than partnership.

Despite suggestions made by some NGOs such as the CID that the *Zabaleen* could continue pig rearing whilst collecting garbage, sorting it, and then selling it to the international companies for recycling at facilities in Cairo’s Eastern fringes, recent developments have demonstrated as unlikely this possibility of fruitful local–global partnership. Instead, the international companies favour training the *Zabaleen* as waged employees whilst allowing them also to search landfill sites for organic wastes for their pig rearing activities. As international expertise meets local practices, a situation of confrontation is more likely than partnership. As previously mentioned the APE organization is more likely to act alongside both government agencies and the big companies in setting up and in administering new recycling activities at a local level with the *Zabaleen* garbage workers engaged as waged labourers.

The NGOs are likely to have a new role under these changed circumstances. The relocation of the sorting activities will disrupt the garbage collectors’ economic sustainability particularly in pig rearing. Indeed, the whole *Zabaleen* recycling industry is likely to modify its links with *wahya* contractors and with local NGOs involved in the area since the 1980s. These include the APE’s paper recycling and rug weaving activities involving female members of *Zabaleen* households (Myllylä, 2001) and the EQI’s upgrading under the World Bank Programme and its establishment of small scale enterprises as part of the *Zabaleen*’s Development Programme (ZDP). Whilst the *Zabaleen* are facing a dramatic and disruptive situation, the *wahya* and these local NGOs can be expected to develop new mechanisms for cooperation with the international companies and with their recycling businesses relocated to Eastern Cairo’s urban fringes.

These expectations of collaboration between the NGOs, the *wahya* and the international companies are based on the APE’s positive reaction to the privatization plans and to the claimed possibility of improving the *Zabaleen*’s livelihoods. Further support for this opinion comes from the EQI’s reports on the *Zabaleen*’s inability to shift from being dependent on the professional assistance provided by the World Bank and various foreign funding agencies since the launch of the 1980s upgrading programme. The EQI’s reports also raise the question of the NGO’s failure to empower the local *Zabaleen* through community initiatives since the 1980s. They have also failed to assist the *Zabaleen* in building channels of communication with Government agencies. Instead there have been conflicts with the *Gammiya* and with community leaders regarding recycling activities. The NGOs have not succeeded in creating any powerful grass-root lobbying to present the *Zabaleen*’s case to public opinion as a mechanism to confront recent governmental privatization plans. It would appear that their business interests now prevail over the NGO’s earlier role of promoting the *Zabaleen* community.

The privatization project threatens major resettlement and relocation impacts on the Moqattam *Zabaleen* community. Resettlement and relocation of recycling activities threatens their invested capital and extends their risk-taking and initiative. The central failure of the government to provide adequate compensation to cover often upgraded dwellings and workshops contributes to the potential traumatic impact of the privatization and resettlement programme on the *Zabaleen* garbage collectors. The state appears to regard them as just another relocated community requiring a transit shelter scheme in a new location. Little thought has been given to socio-cultural and economic differences, which might well affect the *Zabaleen*’s relationship with other relocated poor social groups and, more especially, with the affluent residents of gated communities already established at Qattamiya. The potential for conflict and disputes is high.

The clearing of the *Zabaleen* Moqattam settlement will bring to an end this strategic distributing station for Cairo’s waste as they sort out solid wastes for the NGO’s recycling industry. The *Zabaleen* make use of organic wastes for pig breeding and composting and thereby provide pig meat for Cairo’s local and tourist consumption. This whole recycling system will be threatened by the lengthy travel distances from the proposed

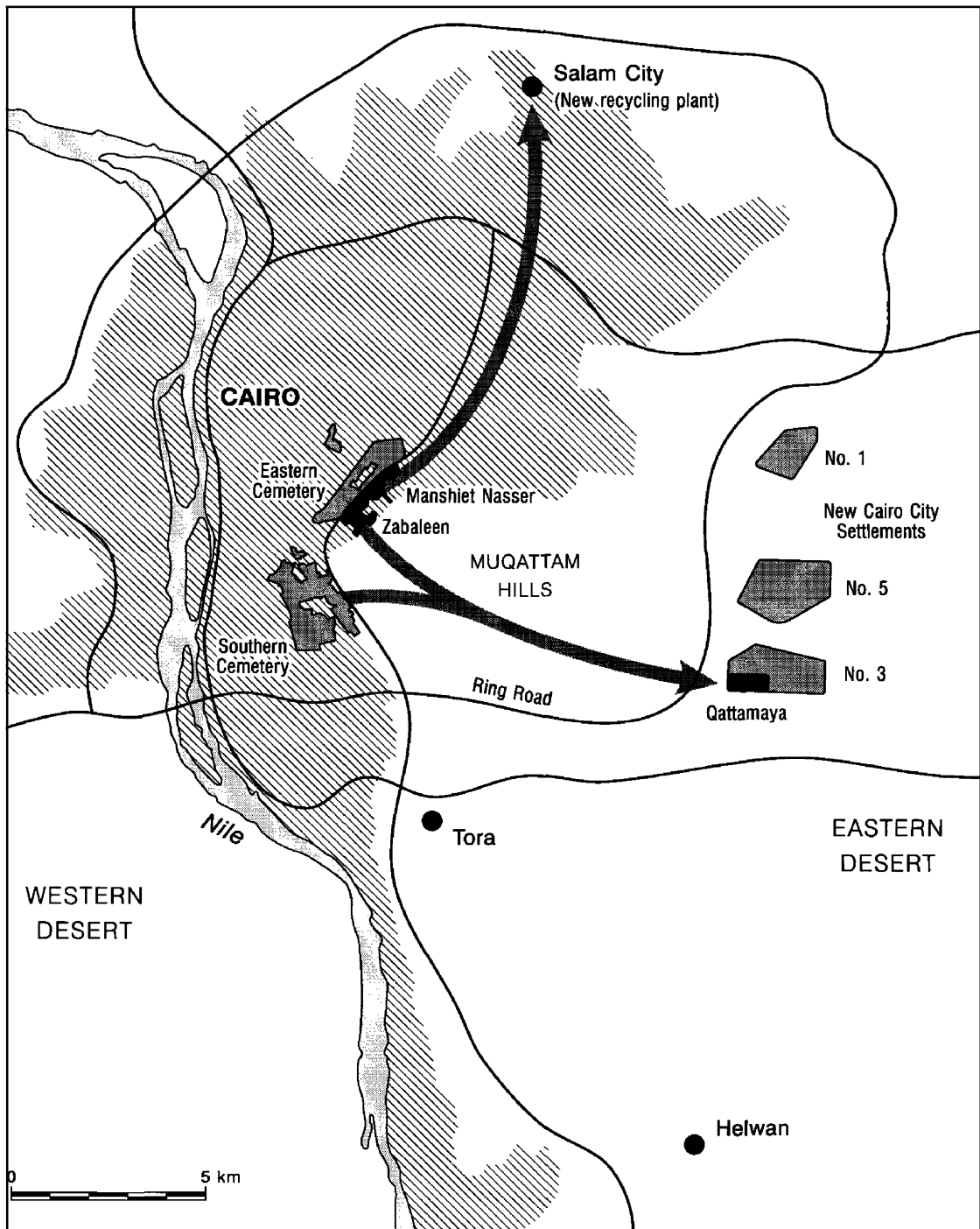


Fig. 4. Relocation and resettlement scenarios.

new settlements in Eastern Cairo. Faced with increased travel costs the poor garbage collectors may decide to abandon their sustainable traditional economic system and join Cairo's underemployed poor. Alternatively they might decide to return to their ancestral villages in Upper Egypt to seek work as landless temporary agricultural workers or they might seek to work for the international companies as waged labourers whilst settling in the Eastern settlements.

It can further be argued that the *Zabaleen* community is the victim of the Government's hidden agenda for the Moqattam district of Cairo. Behind the declared objectives of improving the *zabaleens'* livelihoods and the settlement's environmental conditions, of upgrading waste collection systems and of expanding the associated recycling industry lies a wider but hidden agenda involving urban redevelopment of this part of the city. The development of vacant or vacated land by land speculators could follow the precedent of the Agha Khan's organization's development of the Al-Azhar Urban Park, opened in 2004, and the associated upgrading along the Ayyubid Wall fringing the eastern edge of Old Cairo. Recent efforts at the gradual resettlement of the squatter tomb dwellers of the 'Cities of the Dead' (Sutton & Fahmi, 2002b) and the relocation of supposed obnoxious workshops from Old Cairo would seem to act as precursors of the relocation of the *Zabaleen* to Qattamiya (Fahmi & Sutton, 2003). The geographical propinquity of the *Zabaleens'* squatter settlement to the other Muqattam settlement up on the Muqattam plateau above and overlooking what some regard as squalor could well play a part. As an upper middle class residential district 'upper' Muqattam represents both a powerful lobby and an urban development model to the detriment of the garbage recyclers. Further, the undefined and controversial status of the adjacent Manchiet Nasser settlement could threaten the *Zabaleen* settlement. This long established squatter settlement of Manchiet Nasser could extend to swallow up the *Zabaleen* settlement as an area to accommodate its population growth and land use intensification. Alternatively both settlements could be relocated and resettled as part of a wider social upgrading of this whole district to the south east of Central Cairo. It will not have escaped property developers that Manchiet Nasser and the Muqattam settlement are close to good road access (the Autostrade) and, relative to many other higher-class residential districts, are fairly central within Greater Cairo. If cleared of their present lower class residents both squatter and uncontrolled settlements have immense urban development potential.

If this hidden agenda proves accurate, a future scenario could involve an accommodation of future urban growth within the Muqattam lower plateau through the depopulation of the *Zabaleen* community's area and its repopulation by residents formerly from Manchiet Nasser. There could then follow the gentrification of both the former *Zabaleen* settlement and the dynamic Manchiet Nasser district as urban land speculation links socially and morphologically the lower and upper Muqattam plateaux. Related to these developments could be some upward filtering of those elements of public housing found within the upper Muqattam plateau currently used for housing 1992 earthquake victims or as part of earlier youth housing projects.

These postulated developments are conceptualized in Fig. 4 which attempts to show anticipated population movements and further urban developments involving both residents and workshops of Old Cairo and tomb dwellers in its ancient cemeteries. A particular focus on the *Zabaleen* area is made in the figure as this is most vulnerable to eviction and relocation. Accordingly, the *Zabaleen* seem destined to evacuation and resettlement in contrast to the government's declared objectives of merely improving the *Zabaleen* community's environmental conditions through the relocation of its garbage sorting activities and associated recycling and pig rearing.

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