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Special Feature 2:

Making a virtue of necessity: recycling solid waste by the poor, for the poor

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In the globalized world, waste is one of many examples of practice that divides north from south. The North produces more waste with more recyclable materials (which are frequently not formally recycled). Meanwhile, the South produces less waste with more organic components and where poverty creates the imperative and opportunity for unusually high levels of recycling. No less in Cairo, where waste management has been dominated by the informal sector and where recycling of waste has become an important economic sub-sector sustaining thousands of people.

Surveys repeatedly illustrate that for ordinary people, public cleanliness is a top priority, and lack thereof is a top discomfort or aggravation in and around Cairo and in neighbourhoods. Government research and survey for the Cairo 2050 Vision found similar results. Part Two of this publication details the history and present dilemmas of SWM in Cairo today. As mentioned, up to the beginning of the 21st century, the management method for waste in Egypt was open dumps and unregulated accumulations of solid waste in public places were the only destination for waste. Remarkably, until the 1980s, there was no formal system of waste collection in Cairo. All collection was performed by the Zabbaleen — an 'army' of up to 70,000 informal solid waste removers. They were, and remain, the experts in collection, removal, re-cycling and waste re-sellers. But by 1980, as the levels of solid waste rose with the rapid population growth and expansion of informal areas, the collection needs began to overtake the Zabbaleen's capacity. Uncollected refuse began to build up, overwhelming the municipality and causing a health hazard in Cairo's streets.

Greater Cairo is producing a staggering 14,000 – 15,000 tons waste per day. The current level is the result of exponential increases of MSW following rising populations and increased consumerism. After years of failing to encourage the Zabbaleen to expand and modernize their services, in 2000, the Egyptian government decided to delegate the solid waste management to foreign companies through an international call for tender. Today three foreign companies, (two Italian and one Spanish) are operating in Greater Cairo. The changes have been controversial and mixed results - far from the expected integrated waste management claimed by the National Strategy for Integrated Solid Waste Management. Waste collection rates in Greater Cairo does not reach more than 50 per cent in certain areas, only 35 per cent of the population is served by a sanitary landfill and if companies are producing compost, they do not recycle materials. As elsewhere and as illustrated by the AUC/UN-HABITAT data in Part Two, poorer areas are the most disadvantaged ones. Not least because working in poor areas (normally informal settlements) presents numerous problems of access, density, and quantity of refuse for the companies. It is also suspected that the authorities are less demanding in respect to poorer areas when contracting companies. Nevertheless, despite these changes it is estimated that the Zabbaleen continue to be informally responsible for around a third of SWM in Greater Cairo. (The recent crisis resulting from the government slaughter of their all-important pigs is discussed in Part Two.)

While the Zabbaleen recycle more than 80 per cent of all collected waste, the new MSW companies are required to recycle just 20 per cent — the rest is either composted (organic components) or dumped. This discrepancy offers important opportunities for the poor (Zabbaleen and others) to act as economic agents through offering public municipal services (waste collection) and performing sustainable and environmental services (recycling) at the same time. The economic imperative of the poor creates an unexpected and beneficial environmental service to Cairo. Zawia district in North Cairo provides an interesting example of

spontaneous recycling and SWM by the poor in the informal areas as well as some of the problems facing MWM systems.

In the informal part of Zawia the population density reaches 187,000 inhabitants/km². The district was regularised in 2004 and it is now supposed to benefit from statutory public services. The Italian company is responsible for waste management (AAEC) is facing problems to fulfil its mission because of the high density of the area and thus the high waste generation per km² which make the service more expensive than in middle/high-incomes areas. In Zawia, the collection has been delegated to sub-contractors from the *Zabbaleen* community. However, since the waste has limited interest or attractiveness to them, they only collect waste infrequently resulting in community complaints. These shortages in the service lead to waste accumulation in the streets, but in Zawia, as in a lot of informal areas, different actors are also benefiting from this service dysfunction.

Much has been written and documented concerning the prowess of the Zabbaleen community as recyclers and waste collectors. But on the streets and in the households of Zawia, a more local and more immediate mechanism is in operation. In fact, various people in Zawia make their living from waste picking while many others generate supplementary incomes from waste - incomes that in a fragile low-income environment are significant. Often old women and children, as well as various adults sort through the piles and climb into containers to search for recyclable or reusable materials.

Streets are also operated by informal collectors coming from outside and intercepting recyclable rubbish or discarded items before they are thrown out or disappear. Some may focus on bones, metal, remnants of bread, or egg-cardboard, parts of old electronic goods or clothes. Some people from the area work on order and collect plastics, cardboard, textiles, plastic bottles to supply larger recycling agents. They may pay for their products from poor householders grateful to make small amounts of cash for their cast-aways. In some cases the waste collectors go from door to door and in others they have a local collection point where people bring their rubbish to sell to the dealers. Collectors then resell materials to local workshops or factories for reuse purposes such as the use of cardboard for glass and mirror transportation, or the use of textiles for mattress making, bread goes for livestock breeders and plastic bottles can be used as water/soap containers. The activities remain predominantly local as the collectors and their clients know each other and know their local needs.

Dealers generally make 10 per cent profit on their trade. Despite generating as little as EGP25 (\$ 4.3) per week, certain poor people are willing to deal with it. They often operate in the shadow of the more organised and hierarchical Zabbaleen. One dealer can collect around 200kg materials per week. Old bread collection is around 200kg per week and textile collection around 100kg per week for a population about 41 850 inhabitants. All these activities are as important as the waste collected by the company at the end is poor in recyclable material. The waste that is left for the company to collect is often saturated with moisture and predominantly organic (58% organic and 33% dust) and has no recyclable use for the community but can be recycled as industrial compost by AAEC. In particular, organic waste has little or no value for the Zabbaleen since their pigs were killed in 2009 by government city health intervention.

Necessity is the mother of invention and poverty may be said to be the mother of necessity. Throughout poor Cairo items of any worth are being recycled, reused and transformed by local people. The process only partially deals with the larger problem of municipal waste as it increases with population and consumerism and illustrates, perhaps, more about household poverty in the city than offering an effective solution to its SWM issues.