COMMERCIAL SOLID WASTE COLLECTION By NIGHT-SOIL ATTENDANTS IN KANO, NIGERIA

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The Practice

The collection and disposal of solid excreta in low-income congested areas of Kano city by night-soil[1] attendants. The night-soil attendants are the people who undertake the evacuation of excreta from pit or bucket latrines in households and increasingly from community dispensaries and schools.

The practice was developed to provide an effective, cheap and accessible means of removing excreta from households or institutions where there are no sewers, or septic tank and soak-away and not enough space to bury the excreta. Some parts of the congested low-income areas of Kano city do not have adequate or affordable water supply for flush toilets. The practice helps to provide a cleaner and healthier environment.

Service Coverage and Market Size

The practice serves:

- Low-income urban dwellers who cannot afford to build another latrine together with the shelter but find it cheaper to engage the night soil men to evacuate the filled one.
- Congested areas of the city where there is not enough space to build another latrine when the existing one fills.
- Areas lacking water or resources to have water connection to enable the use of flush toilets.

The practice operates mostly within the low-income areas of the city particularly within the congested areas of Kano covering three local government areas of the city, namely Municipal, Gwale and Dala. However, it is more expensive in the more congested parts of Kano because of lack of access roads to bring the hand carts to the households and the long distances of dumping sites from the old traditional congested city centres.

Management

The service is provided by private individuals as well as organised independent groups. In the case of the private individual, each night-soil man works for himself. However, the private individual practice is said to be giving way to organised independent groups. The customers now contact the leader of a group who would then select a night-soil man to visit the customers' premises, inspect the latrines and agree on the price for the evacuation. Depending on the magnitude of the work, the night-soil man may carry out the work alone or with one or two others.

Institutional and Regulatory Framework

Generally, the government discourages the use of the latrine system which requires periodic evacuation. However, most of the buildings in the congested old city have no approved building plan because they were in existence before the introduction of modern land allocation and approval of buildings. The areas are so congested and lack adequate water to enable proper functioning of flush system toilets. The authority therefore cannot stop the practice since it cannot provide an alternative. No document could be made available by government officials on the regulation of the practice. It is a

[1] *Night soil: Friendly term used for human excreta*

practice that has gained prominence, used by many and acknowledged by the authority but which the authority does practically nothing to assist or promote.

The Technology and Costs

The practice employs the use of materials to evacuate a filled pit latrine and dispose of the excreta by conveying it in large buckets either on the head or in a handcart. The latrine is then trimmed to the requirement of the owner and the top cover reconstructed, usually using wood and clay or reinforced concrete. The practice is carried out with the following local materials:

- Diggers or hoes for excavating hardened excreta
- Shovels for removing the excreta and putting it into containers
- Buckets for conveying the excreta out of the household where a hand truck cannot enter
- A long wooden stick for measuring the depth of the latrine
- Small hand truck for conveying the excreta to the dumping site
- Kerosene and ash used in controlling odour

The night-soil men claimed that at one time they had boots, hand gloves and head cover but now they cannot afford to buy these protective materials. The cost of latrine evacuation is determined by approximating the volume of the latrine. A long stick is sunk into the latrine to determine the depth. The evacuators charge between 1,000 and 5,000 Naira (10 to 50 US$) per pit latrine depending on the volume and distance from the disposal site. Upon reaching a contractual agreement, the evacuators come to the latrine very early in the morning (usually around 4.00 am), to commence work.

The evacuation process is usually started by applying some kerosene to effectively contain the defecation humidity followed by application of ash to control odour. The excreta is then dug and evacuated using diggers and shovels and loaded into buckets for transportation to dumping sites. Some of the evacuators have hand carts which enable them to load a few buckets at a time. As soon as daylight breaks and people start coming out, the evacuation is suspended until the next day at dawn. Since the pumping sites are usually located far away at the outskirts of the town, the evacuation usually takes more than one day to complete.

Impact

This practice, if enhanced in terms of its delivery, can be very effective in congested low income areas that have no pipe water supply system. The practice effectively removes excreta from the households thus reducing bad odour and spread of human waste related diseases. It has also made it possible for the communities to maintain and continue to use the same household latrine for decades

However, increase in the number of people using a single latrine also increases the risk of spread of diseases. Similarly, the dumping of the excreta in the outskirts of the city poses very serious health hazards. The sites are too close to the peri-urban communities. Domestic animals also graze within the vicinity of the dump. Rats, flies and other insects easily roam between the settlements near the site thus facilitating the spread of diseases.

Farmers use the dry manure from the dumping site to fertilise their farms.

Replicability and Sustainability

The practice has been spreading in many parts of the city such that some government institutions like schools and dispensaries now use the services. As the population

continues to increase faster than the increase in water supply, more flush toilets systems fail to function effectively due to lack of adequate water. The alternative has been the use of latrines and employing the services of the night soil attendants to evacuate them. To safeguard ground water from pollution and ensure a healthy environment, KASEPPA has given guidelines for the construction of latrines.

For this practice to improve sanitation, there is a need to improve its implementation through the removal of the human waste from these congested low-income communities, the safe disposal of the waste away from any community and finally, an efficient and safe method of the evacuation and transportation of the waste. Only the first aspect is achieved satisfactorily in this practice. The other aspects need improvement without necessarily affecting the affordability and accessibility of the practice within the community.

If the local and State governments could assist in providing the night soil attendants with protective clothing, access roads to congested areas, vehicles for transporting the waste, and safe disposal sites (instead of the current dumping method), the practice could be well enhanced and be recommended for replication elsewhere.