T T C ca B a d d a a - c . ba c .W c a d c b - a d - , a d d c. ac a , a . a , , a d c a a b a d a a c . . T d a ba d c . a . ba . d A ca a d A a.

O - a a ...?

On-plot sanitation refers to types of sanitation that are contained within the plot boundaries occupied by a dwelling. Commonly, on-plot sanitation is equivalent to 'household latrine', but may also include facilities shared by several households living together on the same plot. Amongst the most commonly found on-plot sanitation technology types are:

- Unimproved pit latrines
- Lid-covered pit latrines
- Ventilated improved pit latrines
- Double-pit pour-flush latrines
- Pour-flush toilets to septic tank
- Bucket/pan latrines

By contrast, the more commonly known *on-site* sanitation includes communal facilities which are self-contained within the site, in contrast to sewerage and dry latrines where

Choices of sanitary technology are based on a variety of factors, of which cost is just one (important) consideration.

2. What about user satisfaction?

There is very little available work on user satisfaction as regards latrine operation in urban areas, or on changes in attitude caused by experiences with latrine operation and maintenance.

Research findings based on extensive user consultation indicate:

- In all but one technology type, users express high degrees of satisfaction with their latrine (in excess of 80 per cent recording ‘satisfied’ or ‘very

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b a ♩ ♩ ♩

5. What are the guidelines?

The main guidelines relating to latrine emptying are twofold, and include advising householders that the filling/ emptying cycle is likely to be between three to six years and that they need to make their own arrangements for desludging. Secondly, emptying costs are strongly location-specific; anticipated emptying costs should be investigated with local contractors during programme planning. Other findings include:

- Manual methods of emptying tend to dominate, and are especially commonplace for simple pit and pour-flush latrines. As expected, mechanical emptying tends to be associated with VIP and septic-tank latrines.
- The responsibility for emptying latrines normally falls to either the users or the contractors. Contractors play an important role in the emptying of bucket/pan and pour-flush latrines.
- Of those latrines which had been emptied, most had been used for between six and eight years. Typically, they had been emptied once or twice.
- Rates for re-filling previously emptied latrines indicate that the majority fill up after three to six years.
- Where users expressed a problem with emptying, the three most important issues were frequency, cost, and hygiene.

Summary

On-plot systems *are* appropriate for low-income urban areas, and should be considered as viable, sustainable technology choices. This research work indicates that a variety of systems are found to be working well on small plot sizes, with limited odour/insect nuisance; without significant operational problems; and to the satisfaction of the end-user. Crucially, there is a significant gulf between the perceptions of professionals and those of the community when regarding the appropriateness of on-plot sanitation in the urban context. The findings show that professionals' understanding of key issues such as insect/odour nuisance, or the operational problems associated with on-plot systems, must be advised by the opinions and perceptions of those who actually use the system.

One of the most important features of the work on on-plot sanitation is that it focuses on the *perceptions* of the users. All too often, assessments and judgements on its effectiveness and appropriateness are made from a technologically biased and purely external perspective. Many evaluations are done by those who are hardly likely themselves to be regular users of improved pit latrines. Establishing the concerns of the users of on-plot systems in urban areas and reflecting these in the guidance is a critical task.

The findings presented in this Technical Brief are drawn from Research Project R4857, *On-plot Sanitation in Low-income Urban Communities*, of the Engineering Division of the Department for International Development (DFID). This work was based on extensive consultation with urban householders (1843 cases) in three countries in Africa and Asia.

Further reading

Alaerts, G.J., Veenstra, S., Bentvelsen, M., van Duijl, L.A. et al., *Feasibility of anaerobic sewage treatment in sanitation strategies in developing countries,* IHE Report Series 20, International Institute for Hydraulic and Environmental Engineering, Delft, 1991.

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