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Periurban Sanitation: What's the Problem?

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ABSTRACT

To meet the WHO/UNICEF target of 'Water & Sanitation for All by 2025' some 4.4 billion people will have to be provided with improved sanitation during 2001–2025, and around half of these are/will be in 'urban' areas – but in reality we are talking about *periurban* areas. Given that most population growth over the next few decades will occur in 'urban' (again, really periurban) areas of developing countries, periurban sanitation will have to become much more important than it already is. Our current focus is on achieving the sanitation target of the Millennium Development Goals, but these efforts will have to be doubled if we are to meet the WHO/UNICEF 2025 sanitation target in periurban areas, and then maintained for the next quarter century as we seek to meet the sanitation needs of the additional two billion or so people expected in periurban areas by 2050.

So the Big Question is: How can we provide affordable sanitation to these very large numbers of poor people in periurban areas in developing countries? The answer to this question depends in part on the population density: at low population densities on-site sanitation systems are normally feasible, but (and as we have known since the early 1980s), even if there is sufficient space for them, they may not necessarily be the cheapest option (and, because we are attempting to serve poor and very poor people, we have to consider cost); and, of course, at high population densities on-site systems become infeasible as there is no space for them. In addition to being affordable, the chosen sanitation system has to be both socially acceptable and institutionally feasible.

Consider the typical periurban situation: a high population density, one too high to permit on-site sanitation systems. What are the 'best' solutions for sanitation? If affordable, the system of choice would normally be simplified sewerage (also known as 'condominal' sewerage). With this sanitation system we should remember that in Natal in northeast Brazil, where it was developed in the early 1980s, it became cheaper than on-site sanitation at the relatively low population density of ~160 persons per ha, there were no connection charges and the monthly charge for the service was only USD 1.50; and that in Chisty Nagar in Orangi, Karachi, Pakistan, where Brazilian-style simplified sewerage was first installed in Asia in the mid-1980s, the residents obtained their water (only ~27 litres per person per day) from public standpipes, thus demonstrating that a plentiful on-plot water supply is not a *sine qua non* for the system. Simplified/condominal sewerage is one of the components of the very successful 'Slum networking' programme in India, and it has also been used in small villages in northeast Brazil. It is socioculturally very acceptable as it appears to its users to be similar to conventional sewerage, so their sanitation system is the 'same' as that enjoyed by the rich. It is also institutionally acceptable simply because it *is* a sewerage system and, as such, it can be readily understood and appreciated even by very conservative sewerage design engineers, especially when they realise that its hydraulic design is actually more rigorous than that used for conventional sewerage.

At this point it would be informative to consider what we would do if – just if – conventional sewerage were sufficiently low-cost for its widespread application in periurban areas. Well, for a start, there would be no discussion: the choice would be made – we would simply install conventional sewerage. However, we would also interact with the beneficiary communities (and this would be the extent of ‘community participation’) to explain pertinent aspects of the system – for example, to inform them what was going to happen, how much the monthly water bill would increase, and offer low-cost loans (to be repaid through the monthly water bill) to install household pour-flush toilets – and, of course, no connection fees. Why should simplified/condominial sewerage be any different?

The next question is also very important: What is an appropriate sanitation solution in very poor high-density periurban areas where simplified/condominial sewerage is unaffordable? The only answer, given that the high density precludes individual household-level on-site systems, is ‘SPARC’-style community-owned, community-managed and community-funded sanitation blocks [SPARC, the Society for the Protection of Area Resource Centres, is an Indian NGO]. They are reserved exclusively for community members – they are not in any sense ‘public’ facilities.

Both simplified/condominial sewerage and community-managed sanitation blocks are well proven sanitation systems and both equally suitable for large-scale replication, so why is periurban sanitation still ‘lingering’ in developing countries? There are several answers to this question, but they all lead to the conclusion that, in order to accelerate periurban sanitation coverage, we need to (i) train and disseminate much more effectively and in a much more focussed way (train local trainers in applicable sanitation systems so they can train others in their own language); (ii) facilitate changes to national sewerage codes and sanitation regulations; and (iii) ensure that decision-makers in global and regional development banks, as well as those in multilateral and bilateral aid agencies, understand the ‘real world’ practicalities of periurban sanitation so that they fund only realistic pro-poor sanitation programmes and projects. If we really want to meet the MDG sanitation target, then we need to start doing all this *very* soon as 31 December 2015 is only 88 months away.