Poor Practice 1

Conventional Sewerage

Conventional sewerage is the sanitation system most commonly used in urban areas in industrialized countries and in non-poor urban areas in developing countries. It comprises a flush toilet which discharges, together with all the other household wastewater, into a network of underground pipes (called 'sewers') which transports the wastewaters from all households in the area to a centralized wastewater treatment plant, from which they are usually discharged into a receiving surface water (less commonly they are used for crop irrigation or fish/aquatic vegetable culture).

Work by John Kalbermatten and his colleagues at the World Bank in 1976- 78 found that the investment costs of conventional sewerage were always *very* high: in a survey of eight capital cities in Africa, Asia and Latin America investment costs were in the range USD 600-4000 per household, with annual economic costs of USD 150- 650 per household (1978 USD).[a] Thus, while conventional sewerage is an excellent form of sanitation for those able to afford it and who have plenty of water for its operation, these figures show that it is *not* an appropriate form of sanitation for poor households, simply because it is wholly unaffordable.

In the past there have been countless sewerage master plans recommending conventional sewerage as the *only* form of sanitation suitable in urban areas - most simply gathered dust on shelves in ministry offices, but a few were put into practice, generally with less than satisfactory results. The basic reasons for this were that the investment costs estimated in the master plan turned out to be gross underestimates, that poor households could not pay the high one-off connection fee (so they did not connect), and that operation and maintenance costs were unaffordable. Thus a very expensive system is actually even more expensive, in fact far too expensive for poor households, and the local sewerage agency could not afford proper, especially preventive, operation and maintenance, with the result that the system quickly deteriorates.

Actually, we do not need to worry about the inappropriateness of conventional sewerage in poor periurban areas as there are several alternative sanitation systems suitable for such areas. These are described in the eleven 'Good Practice' boxes in this series.

Reference

J. M. Kalbermatten, D. S. Julius & C. G. Gunnerson, *Appropriate Sanitation Alternatives: A Technical and Economic Appraisal* (World Bank Studies in Water Supply and Sanitation No. 1). Baltimore, MD: Johns Hopkins University Press, 1982 (available at: http://go.worldbank.org/JKSLGN4OF0).

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[a] In 2007 dollars these figures become USD 1800- 12000 per household and USD 450- 1950 per household, respectively (conversion factors from http://www.oregonstate.edu/Dept/pol_sci/fac/sahr/infcf16652005.pdf).