

## Large-Scale Dry Sanitation Programs –Preliminary Observations and Recommendations from Urban Experiences in Mexico

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**Dry sanitation** is a modern adaptation of the ancient practice of managing excreta without the use of water, and therefore without sewage. It implies: a) waterless toilets; b) the on-site treatment of excreta; and c) the production of a safe and effective soil amendment. Its benefits include saving large quantities of water, reducing water pollution, reducing the volume of excreta, killing off pathogens, and retaining nutrients that can later be applied to agricultural crops.

Dry sanitation has been implemented in rural areas of many countries and urban areas of some. Urban populations have different needs compared to rural settlements. Because of their high human population density, urban areas require greater support infrastructure for the success of this technology.

Large-scale dry sanitation programs have the potential to address a variety of problems that urban areas face today: increased needs for water supply; dwindling sources of water; lack of economic resources to adequately treat domestic wastewater; lack of resources to provide water and sanitation services to rapidly growing urban and peri-urban populations; and public health risks due to lack of adequate water and sanitation provision.

Mexico has a large number of dry sanitation experiences, including some of the largest-scale urban experiences in the world. A study of the strengths and weaknesses of these experiences can provide insight on successful dry sanitation implementation, not only in Mexico, but in other countries as well. This document reports preliminary observations and recommendations based on 15 months of field research in 6 urban sites in Mexico. Research focused on program implementation opportunities and barriers. Programs varied with respect to their degree of continuity, user adoption, and strategies they had developed to address various aspects of program implementation.

Many program weaknesses were due to inadequate planning and lack of understanding of the set of steps necessary to carry out a dry sanitation program. Most programs began operating with little or no information from other experiences, information that might have saved them precious time, effort and resources. This **Report** has been prepared to help practitioners who are designing or already implementing large-scale urban dry sanitation programs. It reviews some of the frequent pitfalls and makes recommendations that may lead to greater program effectiveness.

A summarized list of recommendations follows.

1. A **user follow-up program** (training, resolving doubts, technical assistance) **should be contemplated and budgeted before beginning** a dry sanitation program. A follow-up program should be in place **during at least 2 years**

from the time of toilet installation **or the time it takes to collect the first batch of solid toilet product** (whichever occurs later).

2. **Complete and fully functional toilets** should be delivered **soon** after the users' request. Toilets under these conditions will have **greater probability of good and continued use**. When the toilets are delivered without roofs, walls or other functional components, their probable use or careful use by owners decreases rapidly. Good toilet use is intimately related to user motivation, interest and care.
3. **The person or family receiving the dry toilet should be trained** in its correct use. Poorly functioning toilets because of lack of user knowledge reduce user motivation and interest and give the technology a bad reputation.
4. The **sources of funding for all project phases should be contemplated and ensured before beginning** a dry sanitation program. (This has not been the case in practice, mostly because program promoters were not aware of the non-construction phases of the programs).
5. The **budget** of a dry sanitation program **should include elements in addition to materials and building expenses. Promotional, educational and follow-up components** must be contemplated **in timing, budgeting and personnel calculations**.
6. A dry sanitation program should be initiated only after considering the array of existing dry toilets and **determining which model is best adapted to user possibilities and needs**. Similarly, it is advisable not to promote the large-scale installation of toilets until the **particular model to be promoted has been tested in the specific climatic and cultural conditions** in which it will be used.
7. A **feedback system** between promoters and toilet designers and its users should be in place, in order to **constantly improve** both **toilet design** as well as **program implementation**.
8. Program promoters should **foresee, from the beginning of the program, how all steps involved in toilet use will take place** during the expected toilet lifetime. Especially in urban areas, **obtaining cover or texture material for the toilets and disposal/management of the product** are not necessarily straightforward steps or steps within the possibilities of the users.
9. **Programs initiated by local governments and/or dependent on a highly motivated charismatic individual** should be particularly **careful to make provisions for ensured continuity**.

For a complete copy of the report, visit: [www.dnr.cornell.edu/hdru/PUBS/other.htm](http://www.dnr.cornell.edu/hdru/PUBS/other.htm)  
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