

Design, Development, Pilot Testing and Documentation of Waterless Urinal Prototypes

Supported by
UNICEF & SEI

Investigators
Dr V M Chariar, CRDT, IIT Delhi
Prof L K Das, IDDC, IIT Delhi
Er Ajit Seshadri, The Vigyan Vijay Foundation, Delhi

Keywords : *Waterless Urinals, Pilot Project, NPK, Recycling*

The concept of employing the “Waterless Urinal”, which is already being adopted in some of the western countries, is proposed to overcome the shortcomings in the current approach of managing urinals. Also, the experiences gained in implementing the pilot can be widely utilized to create awareness among professionals and as well as to prescribe some of the technical approaches that can be successfully employed by professionals and institutions.

Although, various trials in terms of utilizing urine for agricultural crops are being taken up in India, the process of building and managing urinals has not been so far tested out. There is a tremendous potential for adoption of this concept across the country, if viable technical options are made available. IIT being a premier technical education and research institution, the pilot project executed will attract widespread attention while the scope for improving the technology will be much higher. On successful demonstration of the pilot project, the following expected results to occur :

1. The pilot will help in demonstrating that waterless urinals can be a good alternative for managing the major component of human sanitation.
2. Showcase that the concept can effectively reduce load on sewage treatment facilities which is a major environmental issue currently faced in India.
3. Highlight savings realised in terms of minimal use of fresh water and other plumbing accessories normally required in the conventional urinals.
4. Showcase in terms of energy, resources recovery and localized decentralized waste management option which can be widely practiced at various locations.
5. Options for improving the growth of plants through use of urine as manure.
6. Demonstrating options for improving the growth of plants through use of urine as manure
7. Develop prototypes of male and female waterless urinal seats which can be adopted widely by manufacturers and builders for promoting the concept
8. Potential of replication of the waterless urinals at other locations of the institute as well as awareness among students studying in the institute
9. Replication of the outcomes through agencies like WaterAid, Wherever the Need and Jindal Steel Industries who have shown keen interest in the topic