



**Workshop
on
SANITATION TECHNOLOGIES**

November 25, 2009

**Jointly Organized
by**



IIT Kanpur



UNICEF Lucknow

Preamble

The improper disposal of waste water, open drains, polluted water bodies, stagnation of water around hand-pumps ruins the conditions of roads and becomes a breeding ground for all kinds of disease producing viruses. In the words of Kofi Annan, Former Secretary-General, United Nations “ AIDS, tuberculosis, malaria, or any of the other infectious diseases that plague the developing world cannot finally be defeated until the battle for safe drinking water, sanitation and basic health care is also won.” Therefore, along with provision of sanitary latrines to prevent open defecation time has come to address the problems of Solid and liquid Waste Management in an integrated manner to prevent environmental pollution and diseases.

Conventional techniques for disposing human waste are built on the premise that the nutrients contained in human excreta have little value, and that waste is suitable only for disposal. Such techniques assume that the environment is capable of assimilating the waste, or they shift the burden to downstream communities. These assumptions lead to linear flows of resources and wastes. Consequently, the environment is polluted, nutrients are lost, and a wide array of health problems results. Conventional systems in fact have become the part of the problem, not the solution. Solution of the problems faced by the society today: water pollution, scarcity of fresh water and loss of soil fertility depends upon how society deals with its wastes, specifically how it deals with human excrement.

The other solution of conventional practices, generally pit latrines, has been widely adopted in developing countries, primarily because it is inexpensive and requires no infrastructure. Though material is not removed from the confined pits, they are prone to periodic flooding, causing them to spill their contents. Liquids may leach into the ground and eventually be carried off-site contaminating nearby wells and underground aquifers. This option also has shortcomings especially in densely populated areas where space is limited and is not feasible in areas with hard ground or high water tables.

Along with construction of toilets sustainability of these systems is also crucial and there is a need for developing low-cost and environmentally sustainable, viable region specific sanitation technologies and systems. On one hand the construction of latrines which use less water must be made compulsory in all places, on the other hand new and innovative technologies like Eco-sanitation, use of human excreta for producing quality fertilizer and manure must be developed.

Eco-sanitation opens up a wide range of sanitation options than those currently considered. These are improvement of health by minimizing the introduction of pathogens from human excrements into the water cycle. EcoSan also promotes recovery and use of nutrients, organics, trace elements, water, and energy safely. Developing countries like India can learn from some of EcoSan projects in other countries like Peru, Syria, Jordania, China and Germany to upscale and upgrade its traditional sanitation systems.

While investments in sewers run into billions of dollars every year despite the problems they create, there is hardly any investment in research for alternative systems which do not destroy nature's nutrient cycles or damage aquatic systems. The time has come to change from large-scale, centralized costly sewage and drainage systems to develop alternatives small scale decentralized waste management and treatment systems wherever possible. In this context there is a need to take stock of what is happening due to the growing concern for ecological sanitation across the world.

The technology should be affordable, available, useable, modern quality technologies. The technologies should be coupled with economic returns like in technologies such as improved leach pits Eco-san, toilet linked bio-gas, vermicomposting and cleaner technologies to give carbon credits. There are several case studies and institutions in India and abroad that have begun to use successfully these alternative technologies. The time has come to revisit, upscale, upgrade and reinvent these technologies so as to provide sustainable technological options.

Objectives

The event is aimed at providing a forum for all researchers and practitioners to disseminate information to the implementing agencies and in turn to the communities on new and innovative technologies. The conference would combine and upgrade the old and traditional sanitation systems and technologies being used by the people with new and innovative modern technologies without compromising on health and hygiene aspects.

Event Schedule

09.30 - 10.00 h : Inaugural Session

Address by Chief Guest

10.00 - 11.00 h : Technical Session

Invited Papers by Panelists

12.00 - 13.00 h : Technical Session (*Continued*)

Invited Papers by Panelists

13.00 - 13.30 h : Discussion &

Vote of Thanks by Moderator

Chief Guest: Dr Bindeshwar Pathak

Founder Sulabh Sanitation and Social Reform Movement

Panelists:

Mr Y D Mathur, Sulabh International

Mr Prakash Kumar, UNICEF

Dr V M Chariar, IIT Delhi

Mr M Subburaman, SCOPE

Dr Paul Calvert, Eco-Solutions

Dr Vinod Tare, IIT Kanpur

Moderator:

Mr Amit Mehrotra, UNICEF