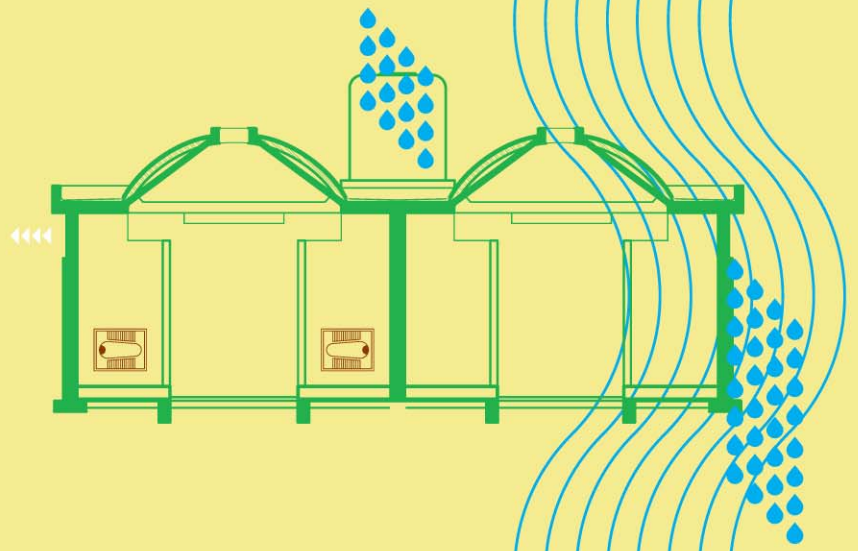
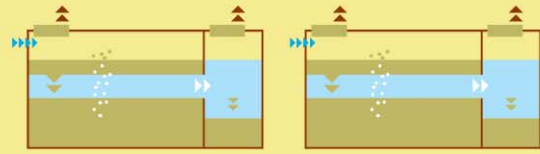
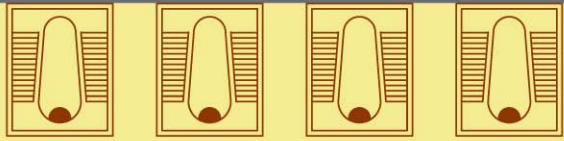


ENGINEERS' TRAINING ON

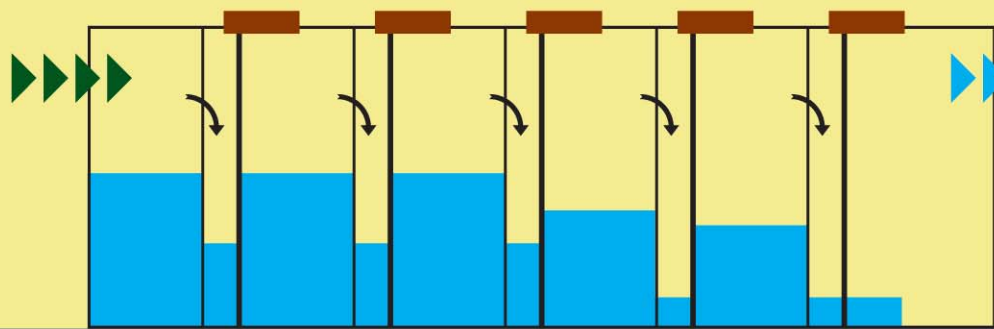
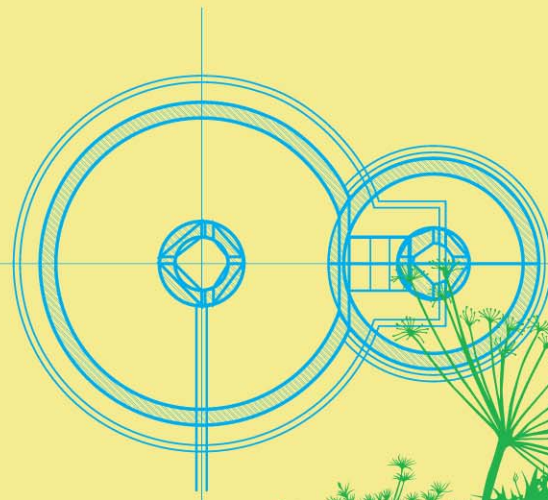
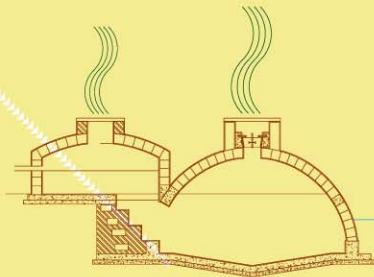


# DECENTRALISED WASTEWATER TREATMENT SYSTEMS (DEWATS)

17-22 MAY 2010



DEWATS Training is a platform for engineers engaged in the sanitation and waste management sector to gain practical skills and knowledge for planning, designing, executing, operating and maintaining DEWATS.



Organised by



Supported by



## BACKGROUND

Urbanisation is one of the most important demographic trends of this century. Rapid growth of cities has created a shortfall in the supply of infrastructure and services leading to a deteriorating environment. Most Indian cities try to handle the infrastructure requirements through centralised systems, that require high capital and Operation and Maintenance (O&M) cost. With increasing urbanisation, the centralised system becomes unmanageable for the local authorities. Decentralised basic need services can complement conventional centralised systems for better service delivery, if not replace it completely.

Today, an estimated two billion people in the world do not have access to 'adequate' sanitation facilities. Disposal of domestic sewage from cities and towns is the biggest source of pollution of water bodies in India. Indian cities generate 33,212 million litre of sewage per day (mld) but can treat only 6,190! This huge volume of untreated sewage remains the biggest cause of water pollution and environmental contamination. Introduction of a decentralised system of waste management as a complementary option to the centralised system can be an effective solution to tackle pollution in urban areas. Moreover, decentralisation helps to increase community participation in the decision making process, in implementation, and in maintenance.

In this context, there is an increasing need for scaling up decentralised approaches for adequate and sustainable basic need services. Decentralised wastewater treatment systems have an enormous potential in contributing to the development of sustainable environmental sanitation. The Consortium for DEWATS Dissemination (CDD) aims to bridge this supply gap by enhancing the capacities of service providers across the country.

# VENUE

Centre for Advanced Sanitation Solutions (CASS)  
Bangalore



# Decentralised Wastewater Treatment Systems (**DEWATS**)

DEWATS is an approach for treatment of wastewater generated from domestic and industrial processes. It is based on different natural water treatment techniques comprising of some basic treatment modules, which are combined according to specific requirements depending on the characteristics of the wastewater to be treated, the desired quality of the treated wastewater and technical specificities. DEWATS units can be designed for treatment of wastewater flow ranging from 1 to 1,000 m<sup>3</sup> per day.

DEWATS has certain advantages over the centralised systems. It is easily workable, simple, its on-site treatment modules require minimal operation and maintenance, it requires no mechanical parts and less sewerage network. All these features also allow for substantial cost savings.

## Training Objective

The objective of this training programme is to introduce and impart engineering skills to professionals for designing and implementing DEWATS.

## Participants

Participants for this training course could include sanitary and public health engineers, wastewater practitioners, architects, engineers and professionals from government and non-government organisations.

## Eligibility Criteria

The training course has been carefully designed for participants with a background in Engineering/ Architecture/Environmental studies/Water resources management. The participants should have a prior work experience of a minimum of 1-2 years in the water, sanitation and waste management sectors.

## PROGRAMME OVERVIEW

The course duration is 6 days and is scheduled during 17th - 22nd May 2010. The training involves lectures, presentations, case studies, practical workshops, study tours, etc. The medium of instruction and teaching will be English. The course timing will be from 09:00 a.m. to 06:00 p.m. on each of the days of the programme.

## COURSE OUTLINE

- Introduction to wastewater and its effective management
- Different approaches and technology for wastewater treatment
- Introduction to Decentralised Wastewater Treatment Systems (DEWATS)
- Feasibility and Initial Project Planning
- Preliminary Planning and Design of DEWATS
- Implementation of DEWATS
- Operation and Maintenance

## TRAINING TEAM

The participants shall be trained by expert professionals from CDD, BORDA and other relevant experts in the areas of engineering, architecture, environment, infrastructure, social development and management.

## REGISTRATION

This training programme has been carefully designed for a maximum of 20 participants. The enclosed application form should be filled in all respects and returned to the contact address given below.

As the seats are limited, the seats will be allotted on a first-come-first-served basis.

## ATTENDEE BENEFITS

- Training participants will be provided with design support for 2 DEWATS projects
- Training participants will be linked with CDD/BORDA's International Engineer's Network
- Training participants will have access to regular knowledge and skill up gradation through the Network

## EVALUATION AND CERTIFICATION

The participants will be evaluated for their performance during the training course and will be awarded certificates on satisfactory completion of the course from the Centre for Advanced Sanitation Solutions (CASS).

## PROGRAMME FEE

This is a fully residential training course. The course fee is Rs. 20,000/- (Rupees Twenty Thousand Only), which includes boarding and lodging, training kit, materials, local travel and training certificate. The short-listed participants need to send a DD/Cheque for the above amount to the address given below.

## TRAVEL & INSURANCE

The nominated participants have to bear all expenses towards their onward and return travel to and from Bangalore. The organisers and sponsors shall not be responsible for any risk of illness, accidents, loss of money, property, etc. incurred by the participants. Participants are strongly advised to insure themselves against such risks.

## VENUE

The training course will be conducted at the CASS, Bangalore. This centre has been jointly established by CDD Society and RGRHCL, Karnataka.

*NOTE : The brochure and application form can be downloaded from [www.cddindia.org](http://www.cddindia.org), [www.borda-sa.org](http://www.borda-sa.org)*



Consortium for  
DEWATS  
Dissemination  
Society



BORDA



RGRHCL

**Consortium for DEWATS Dissemination (CDD) Society** is a not-for-profit organisation comprising of like-minded network partners seeking to promote the provision of basic need services in urban and rural development through the promotion of decentralised solutions in Community Based Sanitation (CBS), Wastewater Treatment Systems (DEWATS), Solid Waste Management (DESWAM), Decentralised Water Supply Systems (DEWASS), Decentralised Renewable Energy Systems (DERES) and Urban Sanitation Planning.

**Bremen Overseas Research & Development Association (BORDA)** was founded in 1977 as a non-profit organisation in Bremen, Germany. Since 1979, BORDA has been working in India with local partners to implement and disseminate sustainable solutions to the related problems of poverty and environmental degradation. Through integration of appropriate eco-friendly technology into a holistic framework, including technical, social, economic and environmental components, BORDA facilitates provision of basic need services to urban, peri-urban and rural populations, and technical support to small and medium sized enterprises, institutions, settlements and communities.

**Rajiv Gandhi Rural Housing Corporation Limited (RGRHCL)** is a Government of Karnataka Public Ltd. Company. It has set up diverse training infrastructures across the State of Karnataka. RGRHCL has experience in construction, coordination and facilitation in the provision of housing for the Economically Weaker Sections (EWS) of society under various State Government schemes.

**For any enquiries contact:**  
Consortium for DEWATS  
Dissemination (CDD) Society

#621, 5th Main, OMBR Layout, Banaswadi Post, Bangalore  
560043 INDIA  
**Tel/Fax:** +91-80-25452804/805  
**Email:** bangalore@cddindia.org, **Website:** www.cddindia.org