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<http://www.earthday.org/>

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Test your knowledge...





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PROLOGUE

Warm greetings from the CDD Society! It is our pleasure to bring you the May 2010 issue of e-Disha. This issue highlights the recent trainings, workshops and projects of CDD network and information like project fact sheet and COD analysis in wastewater treatment.

We would like to express our sincere thanks to you for your constant support and encouragement. The Editorial Team would be pleased to receive feedback and suggestions. Contributions to the newsletter are also most welcome.

PICTURE OF THE MONTH

What comes to mind immediately after looking at this picture of the month? The swine flu campaign or victims of swine flu? Well it may look like that but this is one of the practical sessions in the training on Operation & Maintenance (O&M) of DEWATS. The participants are wearing masks and gloves as part of safety measures during the Operation and Maintenance activities. The training was organised at the Centre for Advanced Sanitation Solution (CASS) in Bangalore on the 5th of March 2010. The training consisted of both practical and classroom sessions. Attendees were taken to the DEWATS site in the Beedi Workers Colony situated near CASS for practical sessions.



Ms. Susmita Sinha explaining O&M activities for a Biogas Settler

In this picture, Ms. Susmita Sinha, Unit Coordinator of the Capacity Building unit at CDD is explaining the regular maintenance activities to the participants that need to be carried out for a biogas reactor of DEWATS.

PROJECT FACT SHEET

DEWATS at Salokhe Park

[http://www.cddindia.org/downloads/CBS_Projects/12.Salokhe%20Park%20\(IIW\).pdf](http://www.cddindia.org/downloads/CBS_Projects/12.Salokhe%20Park%20(IIW).pdf)

RESEARCH ON SANITATION

"Public Funding for Sanitation: The many faces of sanitation subsidies" by Barbara Evans, Carolien van der Voorden and Andy Peal.

This document addresses the provision of basic sanitation in both rural and urban contexts and therefore includes a consideration of financing for both on-site sanitation and networked sewerage in urban areas but stops short of a full discussion of water/sanitation utility financing.

Read More

[http://www.reliefweb.int/rw/lib.nsf/db900sid/LGEL-5Q4DGB/\\$file/lou-water-02.pdf?openelement](http://www.reliefweb.int/rw/lib.nsf/db900sid/LGEL-5Q4DGB/$file/lou-water-02.pdf?openelement)

DBNS ELEMENTS

Decentralised Solid Waste Management (DESWAM)

The Municipal Solid Wastes (Management and Handling) Rules, 2000 brought out by the Ministry of Environment and Forests, enforces management and handling of municipal solid waste. Under this act every municipal authority is responsible for the implementation of the rules for collection, storage, segregation, transportation, processing and disposal of municipal and solid waste. Implementation of the rules on a large scale or in a centralised system often creates difficulties in managing such a large area and incurs high capital costs.

The problem can also be in bringing people together to support solid waste management (SWM) programmes. CDD believes if the activities are decentralised, the system becomes easier to maintain and this gives a platform for community involvement.

Decentralised Solid Waste Management (DESWAM) is an approach that provides solutions for waste management at decentralised locations where appropriate SWM practices are missing or if present, are not adequate or suitable. DESWAM aims to have practices of solid waste management which are simple, decentralised, cost effective and easy to maintain.

DESWAM follows the basic steps of centralised SWM, such as collection, treatment and disposal. However, to make the process simpler, easy to maintain and profitable, DESWAM works with modules like segregation of waste at the source, composting of bio-waste and the sale of recyclables. Once collected, the bio-waste can be taken for suitable composting and the composted manure sold to farmers or other users. Any recyclables recovered can be sold to retailers and the rejects can be safely disposed off to the Municipal Corporation's waste. This approach is self sustainable and applicable to various sectors from an individual house to small-medium communities and enterprises.

WASTEWATER ANALYSIS

COD Solutions (A+B) Test

To determine Chemical Oxygen Demand (COD) concentration ranging from 500 - 10000 mg/l



COD Solutions (A+B) Test Kit

Advantages:

- Accurate results
- Titration process not required
- Approximately 200 tests can be performed with this COD solution (A+B) kit

Preparations:

Check the chloride content with the Merckoquant Chloride Test. Samples containing more than 2000 or 5000 mg/l Cl⁻ must be diluted with distilled water prior to determining the COD.

Procedure:

- Pipette 0.3ml of Solution A and 1.8 ml of Solution B into an empty cell.
- Carefully add 1ml of the wastewater sample to run from the pipette down the inside of the tilted cell onto the reagent.
- Tightly attach the screw cap to the cell and vigorously mix the contents.
- Heat the cell at 148 °C in the preheated thermo reactor for 120 min.
- Remove the hot cell from the thermo reactor and allow cooling in a test-tube rack.
- Wait 10 min, swirl the cell, and return to the rack for complete cooling to room temperature (cooling time at least 30 min).
- Measure in the Spectroquant.

INTERVIEW



Ms. Gayathri Devi

An interview with Ms. Gayathri Devi, Senior Project Engineer at the CDD Society

Gayathri Devi is one of the key persons in implementing the DEWATS project linked with Simplified Sewer System (SSS) in Swatantra Nagar, Bangalore. In an interview with her, she shared her experiences and challenges in the implementation of the project.

1. Could you please give a brief description of the project?

"Swatantra Nagar is a Low Income Group (LIG) colony located approximately 12 km north east from Bangalore City Corporation. There are approximately 400 households and the total population in this area is 2000. The area does not have an adequate drinking water supply or



sanitation facilities. The inhabitants of nearly 200 households in Swatantra Nagar opt for open defecation due to an inadequate water supply and a high water table that results in soak pits filling up fast and so requiring desludging at frequent intervals. To overcome this situation, Water and Sanitation for Urban Poor (WSUP) approached the CDD Society to implement SSS-DEWATS (Simplified Sewer System and Decentralised Wastewater Treatment Systems) for the affected 200 households. This approach is an effective sewage disposal system which can be easily managed by the community and decreases the cost of desludging soak pits. I was involved in this project from the conception to the final completion of construction".

2. What were the challenges faced during the project implementation and how were they resolved?

"First of all, designing sewer lines was a big challenge because of the narrow streets and roads in this area. The layout of the colony and houses are not well planned, so we had to come up with more than five concepts before an appropriate concept that suited the terrain and water table of the colony was finalised. Finding enough space for the construction of DEWATS was another problem in the colony. The allocated space was not enough to execute the design of the DEWATS. After several attempts, the design of the DEWATS was modified to fit within the allocated space without compromising the quality of the treated wastewater. Even during construction, lots of technical challenges came up but with the help of WSUP, the problems were overcome. For example we needed to blast the rocks for excavation".

3. What is the feedback from the community about the project?

"CBS-DEWATS projects can only be sustainable with community participation and their ownership. Considering this, our approach, right from the beginning, was to involve the community in the project planning, pre-implementation, implementation and post implementation. The community people were very happy about this project as it would be a suitable approach for effective sewage disposal of the colony. After understanding the importance of sanitation and hygiene, the people from the community came forward to take various initiatives. Now there are street leaders and caretakers of the DEWATS and a water & sanitation committee has been formed within the community to take care of the O& M of the DEWATS.

Each household pays Rs.1500 for individual household connections and Rs.150 per year for the operation and maintenance of the project to the committee. Inauguration of the project is planned during May 2010".



DEWATS during construction completion stage



Proposed site for DEWATS at Swatantra Nagar



Rocky layer removed after blasting - Excavation stage



Construction stage - Top slab steel reinforcement



Simplified Sewer System - Individual house connections



Completed DEWATS plant ready for inauguration

NEWS AND VIEWS

Training on Operation & Maintenance (O&M) for Community Based Sanitation (CBS) - DEWATS

The CDD Society in collaboration with Bremen Overseas Research and Development Association (BORDA) and the Rajiv Gandhi Rural Housing Corporation Limited (RGRHCL) organised a one-day training on Operation & Maintenance of CBS-DEWATS at CASS on the 16th April 2010. A total of 21 participants who belonged to different DEWATS projects like East Devadhanam and Musiri in Tamilnadu, Ullalu Upanagara and Roopa Nagar in Karnataka and Rajendra Nagar in Maharashtra participated in the training programme.



Class room session of O&M training



Distributing Participation Certificate



Group photo of O&M training participants

The main objective of the programme was to make the participants aware of the key activities to be carried out during O&M of DEWATS. Regular and proper O&M ensures the sustainability of DEWATS for many years. The training included both theoretical and practical sessions. The key steps of O&M for each module were shown and explained, using the DEWATS at the Beedi Workers Colony as a live example. Certificates of participation were distributed to the participants after the successful completion of the training course. This was the second training that was organised on O&M.

'Decentralised Wastewater Treatment Solutions in Developing Countries' in Surabaya, Indonesia

A CDD-BORDA team attended the international conference held in Surabaya, Indonesia between the 23rd and 26th of March 2010. The conference was about decentralised approaches for wastewater treatment, as conventional centralised systems are no longer able to cater to the growing demand and need for sanitation solutions. The focus of this conference was on the technical and engineering components required for decentralised sanitation systems as well as on social, institutional and financial variables. The objective of BORDA, as co-hosts of the conference, was to facilitate a fruitful exchange of best practices between practitioners, sector decision makers and researchers. The objective was also to further promote and make mainstream decentralised wastewater treatment and sanitation services as a professional option within the sector.



International Conference - Surabaya, Indonesia

The CDD Network participated in the conference to showcase its approaches for upscaling decentralised sanitation efforts in India and its methodology for preparation of Citywide DBNS Plans. The conference successfully highlighted the fact that the combined efforts of technology, supported by social, financial and institutional assistance, are essential for sustainability and upscaling to meet the increasing demand for sanitation. The CDD-BORDA team also re-emphasised the importance of decentralised approaches for wastewater treatment systems at an international level in this conference.

City Level Consultation Workshop for the Preparation of City Sanitation Plan (CSP)

Under the National Urban Sanitation Policy (NUSP), the Ministry of Urban Development (MoUD) has identified 17 cities in India which they want to provide with 100% sanitation. To achieve this goal, MoUD granted the task to German Technical Cooperation (GTZ), New Delhi. The CDD Society, as a leading organisation in a Consortium with Alchemy Urban Systems (AUS), Bangalore and Centre for Environmental Planning and Technology (CEPT), Ahmedabad has been awarded the task of preparing City Sanitation Plans (CSP) for the cities of Raipur, Shimla and Varanasi. There are other consultants doing CSP for the other cities. To ensure similarity in the outcome of the

CSP projects, GTZ organised a one-day workshop on the 16th April 2010 in Bangalore and invited MoUD, key city officials and consultants who are already engaged in preparing CSP. The main objective of the workshop was to discuss the different methodologies of consultant organisations and bring them to a common understanding, which would provide a platform for the project activities to run smoothly in the respective cities. Consultants presented their proposed methodologies for CSP to key officials of MoUD, GTZ and city officials. Queries on presentations were discussed.



Participants of City Level Consultation Workshop, Bangalore

An explanatory CBS-DEWATS model and selected posters were also displayed by the CDD Society in the workshop. About 35 participants from MoUD, GTZ, city officials, and consultants attended this workshop.

Upcoming: DEWATS Engineers' Training in May 2010

The CDD Society will be holding a 6-day introductory training programme on Decentralised Wastewater Treatment Systems (DEWATS) from the 17th May to the 22nd May, 2010 in Bangalore. The training will focus on the planning, implementation and management of DEWATS. Eligible participants are engineers and wastewater specialists who are interested in acquiring knowledge and skills on DEWATS. Interactive sessions, field visits, analysis of case studies and hands-on training will be provided by an experienced team from CDD, BORDA and different relevant organisations, representing a good balance between academicians and practitioners. Certificates of participation will be awarded on the successful completion of the course. The training brochure and application form are attached. The training is being organised in collaboration with BORDA, Germany and the Rajiv Gandhi Rural Housing Corporation Limited (RGRHCL), Bangalore.

INTERESTING LINK

Earth Day Network

<http://www.earthday.org/>

The Earth Day Network has a global reach with more than 20,000 partners and organisations in 190 countries. The Earth Day Network was founded on the premise that all people, regardless of race, gender, income, or geography, have a moral right to a healthy, sustainable environment. Their mission is to broaden and diversify the environmental movement worldwide, and to mobilise it as the most effective vehicle for promoting a healthy, sustainable environment.

QUIZ

Q. What is the range of per capita waste generation in major Indian cities?

Ans: <http://www.indiatogether.org/environment/articles/wastefact.htm>

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