



Consortium for  
DEWATS  
Dissemination  
Society



## PROLOGUE

Warm greetings from CDD Society

## INTERVIEW

An interview with Satchit Bhandarkar,  
Coordinator, CDD RCO, Nagpur

## PICTURE OF THE MONTH

Training on Periodical Maintenance of DEWATS

## NEWS AND VIEWS

Exposure visit of Hetauda Municipality Officials  
to DEWATS and DESWAM Project sites

## PROJECT FACT SHEET

DEWATS at Bhavani Road

Participation in National level Exhibition – Vastu  
Vision

## RESEARCH ON SANITATION

Case Study on Sustainability of Rural Sanitation Marketing in  
Vietnam by Christine Sijbesma, Truong Xuan

The Annual BORDA Partner Network Meeting  
2010 at Munich, Germany

Rescue and Rehabilitation Works in Leh

## DBNS ELEMENTS

Operation and Maintenance (O&M) of DEWATS

## INTERESTING LINK

<http://www.idrc.org.sg/>

## WASTEWATER ANALYSIS

Flow meter

## QUIZ

Test your knowledge...



## PROLOGUE

Warm greetings from CDD Society! We have the pleasure to bring you the September 2010 issue of e-Disha.

Apart from the regular topics that are covered in the newsletter, this issue will also include information on periodical maintenance of DEWATS units and training programmes organised by CDD Society. The Editorial Team would be pleased to receive feedback and suggestions. Contributions to the Newsletter are most welcome.

## PICTURE OF THE MONTH

### Periodical Maintenance Training

Training on Periodical Maintenance of DEWATS was conducted from 9th - 11th August 2010 at the CDD Society in Bangalore. The participants were engineers, operators and other responsible persons working with DEWATS.

The Training was conducted with the object of imparting knowledge and enhancing the skills of persons associated with the operation and maintenance of DEWATS units. The focus was specifically on periodical maintenance tasks.

This 3-day training programme included theoretical sessions with practical hands-on training at the Anuma DEWATS site in Bangalore. The practical hands-on training included cleaning of pipelines, assessment of sludge, desludging of the settler and baffle reactor and cleaning of PGF filter material.



*Practical training session*

## PROJECT FACT SHEET

DEWATS at Bhavani Road

[http://www.cddindia.org/downloads/CBS\\_Projects/4.Bhavani%20Road%20\(TNSCB\)%20-%208%20Blocks.pdf](http://www.cddindia.org/downloads/CBS_Projects/4.Bhavani%20Road%20(TNSCB)%20-%208%20Blocks.pdf)

## RESEARCH ON SANITATION

### Case Study on Sustainability of Rural Sanitation Marketing in Vietnam by Christine Sijbesma, Truong Xuan

This case study of a WSP project focuses on learning how to combine the promising approaches of Community-Led Total Sanitation and Sanitation Marketing. It also shows how to generate sanitation demand and strengthen the supply of sanitation products and services at scale, leading to improved health for people in rural areas. It is a large-scale effort to meet the basic sanitation needs of the rural poor who do not currently have access to safe and hygienic sanitation.

Read more.....

[http://www.wsp.org/UserFiles/file/WSP\\_SustainabilityCaseStudy\\_TSSM.pdf](http://www.wsp.org/UserFiles/file/WSP_SustainabilityCaseStudy_TSSM.pdf)

## DBNS ELEMENTS

### Operation and Maintenance (O&M)

Operation and maintenance is crucial for ensuring functionality and longevity of any on-site wastewater treatment systems. DEWATS is so designed as to maximise the reliance on natural process, hence, operational and maintenance tasks are minimised. The primary object of the operation and maintenance of DEWATS is functionality and maintenance of the plants, both efficiently and economically. A properly operated and maintained DEWATS is an economically productive system, environmentally balanced and socially acceptable over a long period.

The objects of operation and maintenance are:

- To identify possible hindrances to free flow in pipes and in the DEWATS modules
- To identify and prevent damages, leakages and cracks in the water seals
- To prevent bad odor in the vicinity of DEWATS units
- To ensure optimal utilisation of the by-products from the operation of DEWATS
- To prevent flooding and breeding of mosquitos

In general, the O&M of wastewater treatment systems consists of a wide range of tasks - operational tasks, system operation expenses, equipment replacement and waste disposal. The operation and maintenance tasks are separated into regular day-to-day tasks and periodic tasks that must be carried out only at regular intervals as per the design of the treatment unit or in case of emergency. The periodical tasks are cleaning of registers, checking the biogas leakage, desludging of settlers and baffle reactors, cleaning or replacing PGF filter materials.



*Ensuring no gas leakage in Biogas digester neck*



*Cleaning of Settler chambers*



*Desludging of biogas settler*



*Cleaning of PGF filter materials*

It is most essential that operators and care-takers have adequate knowledge of site specific tasks needed to optimise DEWATS operation. The O&M issues relate not only to technical aspects but also to social, economic, institutional, managerial and environmental conditions. The basic requirements that make for a successful O&M system are:

- A thorough knowledge of the plant, machinery and equipment provided in the DEWATS units
- A thorough knowledge of the treatment process
- Delegation of specific tasks to operation staff
- Training of all operation staff in the operating procedure
- Good house-keeping
- Proper logging of all O & M activities

The tasks are simple and require basic training. However, they are crucial to ensuring a sustained performance of the treatment system.



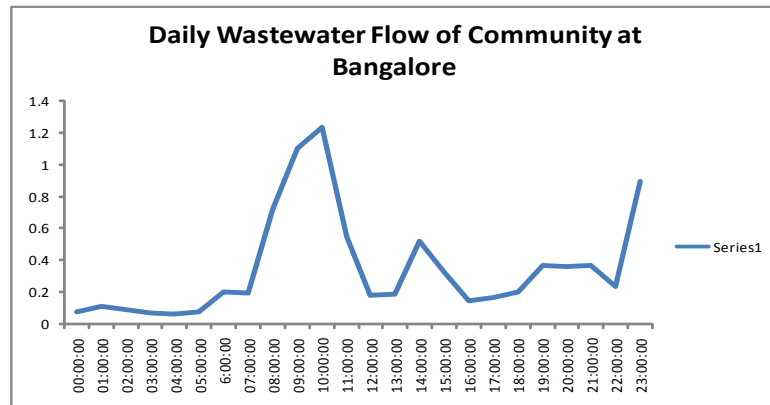
## WASTEWATER ANALYSIS

### FLOW METER

The MID flow meter built by ABB enables an accurate assessment of the daily wastewater flow generated by communities, public toilets, institutions and other beneficiary groups. The flow meter measures the exact hourly and daily flow in m<sup>3</sup>/hour, l/min and other suitable units. The information on daily flow helps to quantify the per capita wastewater generation, which is a crucial information for the DEWATS Design Engineers. Moreover, the absolute peak-flow and the maximum peak-flow hours can be identified. This is important for computing the upflow velocity in the anaerobic baffle reactor [ABR]. The upflow velocity is an important parameter since it indicates the time of retention of sludge and thus, bacteria inside the ABR compartments.



ABB Aqua Master Flow Meter



This will lead to improved knowledge on patterns of wastewater generation and per capita production for different states, communities and institutions. This will result in more accurate input assumptions for the DEWATS Engineers and thus, help improve the overall performance of DEWATS.

## INTERVIEW

An interview with Satchit Bhandarkar, Coordinator, CDD RCO, Nagpur



Mr. Satchit Bhandarkar

1. You have been constantly lobbying with policy makers at the State Government level for dissemination of DBNS services. Please explain how have you been able to do this?

Lobbying efforts in Maharashtra started through strategic planned interventions, with Indian Institute of Youth Welfare (IIYW), Nagpur, which is one of CDD's network partner organisations. Initially, meetings were held with Municipal Commissioners to disseminate the concept of Decentralised Basic Needs Services (DBNS). Later, these were extended to the state level in phases. In first phase, lobbying started with Water and Sanitation Department and Urban Development Department in Maharashtra to create an understanding and perspective on DBNS services.

In the second phase, during 2005–2007, 3 State-level Seminars were conducted in collaboration with Water and Sanitation Department and Urban Development Department. These seminars targeted the key authorities of Municipalities and other government departments for integrating DEWATS at policy level and to create awareness among them regarding DEWATS as a wastewater treatment option. In the third phase, 3 Zonal Seminars were organised in Amravati (Vidarbha Region), Aurangabad (Marathwada Region) and Kolhapur (Western Maharashtra) during 2007 and 2008. In 2009, a State-level Seminar was organised in Kolhapur jointly with the Kolhapur Municipal Corporation and the Water and Sanitation Department.



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In the fourth phase, during 2009–2010, Divisional Seminars were conducted to disseminate decentralised treatment options among the Municipal Councils in the Vidarbha region. During the year 2009 – 2010, CDD RCO Nagpur with CDD partner organisation IYW participated in exhibitions to disseminate DBNS services among different stake holders at regional level throughout India, including the North-eastern states both in rural and urban sectors.

2. Can you list few of your achievements for the e-Disha readers?

- In 2008, the Mumbai Municipal Corporation made a proposal to integrate decentralised options in Development Control Regulations (DCR).
- In 2009, a notification was issued by Kolhapur Municipal Corporation to integrate DEWATS options in DCR and make wastewater treatment mandatory for small and medium townships, hospitals & institutions.
- In the year 2010, Nagpur Municipal Corporation issued Notification to amend Development Control Regulations to integrate Decentralised treatment options in their regulations for making wastewater treatment mandatory for small & medium townships, hospitals, and institutions.
- In the year 2010, Maharashtra Government Urban Development Department declared Eco-friendly Housing Policy to integrate decentralised treatment options, rainwater harvesting & solar energy consumption mandatory for small and medium housing colonies.
- Decentralised treatment options are now integrated in National Sanitation Policy as well as Maharashtra Sanitation Policy. Therefore, base has been developed to disseminate DEWATS at broader level.

3. What are the difficulties that you have faced in lobbying with the Government officials and have you overcome these difficulties?

Lobbying activities at local level as well as state level is a time consuming process and it requires regular follow-up with key authorities. The approval processes and systems at government level are very long based on the governmental procedures. Seeking appointment with key authorities is again a tedious task and it requires patience as well as regular correspondence to get appointment. Regular transfer of key Government officials is a big constraint to do continuous follow-up with officials. At RCO Nagpur, we learnt the above things through our experience and we followed up with key authorities on regular basis.

4. What are your future plans with respect to lobbying with Maharashtra Government?

- To motivate more Municipal Corporations to amend Development Control Regulations to make decentralised wastewater treatment mandatory.
- To contact key Municipal Councils in Vidarbha as well as in Maharashtra to disseminate decentralised treatment options for implementation.
- Lobbying with UD - Department Maharashtra level for issuing GR to Municipal Corporation & Municipal Council for having mandatory orders of implementation of decentralised treatment options at city and town level.

## NEWS AND VIEWS

### Exposure visit of Hetauda Municipal Officials to DEWATS and DESWAM Project sites

CDD Society, in collaboration with the Environment and Public Health Organisation (ENPHO), Nepal organised an exposure visit for Hetauda Municipality officials from Nepal during 27th – 31st August 2010. The group consisted of the CEO of Hetauda Municipality along with other senior Municipality officials.



The objective of the exposure visit was to orient the Hetauda Municipality officials on DEWATS and CBS projects in India, as they are in the process of establishing community managed compost plant and community toilets in their Municipality in Nepal. The expected impact was that these officials will be able to apply the knowledge gained in establishing community managed compost plants and toilets.



*DESWAM project site, Kulithalai*



*Site visit to Terra Firma, Bangalore*



*Participants' Group*

During the five day exposure visit, the officials visited the best practice sites of DEWATS and DESWAM in Bangalore and Trichy. The officials were very impressed by the decentralised basic needs services being provided by CDD Society.

#### **Participation in National level Exhibition – Vastu Vision**

A National level Exhibition 'Vastu Vision' was organised by Shree Marketing from 26th - 30th August 2010 at Kasturchand Park, Nagpur. CDD Regional Cooperation Office, Nagpur participated in the exhibition. The objectives behind RCO's participation in the exhibition were to disseminate DBNS products developed by CDD Society and to develop linkages with key visitors. DEWATS models of three projects, namely, Rajendra Nagar, Kolhapur; Mahajan Nagar, Nagpur; and Lonara Vocational Training Center, Nagpur were displayed which attracted lots of people to visit the stall. Posters on DBNS services were displayed to provide detailed information regarding services of CDD Network. Electronic poster scroller was kept to disseminate BORDA's and CDD Network's activities. During the three day exhibition, more than 1200 people visited the stall out of which, more than 90 visitors showed interest in getting more information about DEWATS. Around 35 visitors registered their inquiries and requested to visit their site and have initial discussions to analyse the problem of wastewater treatment and provide sustainable solution through the implementation of DEWATS.

#### **The Annual BORDA Partner Network Meeting 2010 at Munich, Germany**

The Annual BORDA Partner Network Meeting 2010 will be held at Munich, Germany from 13th to 17th September 2010. The date and the place of the meeting has been selected to coincide with IFAT ENTSORGA, an international trade fair taking place from 13th to 17th September 2010. IFAT ENTSORGA is the world's most important trade fair for innovations, new developments and services in the fields of water, sewage, waste and raw materials management. The participants of the meeting include representatives from partner network of BORDA. The five day meeting will include presentations from all BORDA network partners on their activities. The presentations will focus on the review of the activities accomplished in the year 2010 based on the planning made in the beginning of year. The planning for next phase 2010-2011 will also be done.

#### **Rescue and Rehabilitation Works in Leh**

The flash floods of August 5th-6th, caused largely by cloudbursts around Leh town, were declared as the worst natural disaster in the history of the region. The worst affected were parts of Leh town and a settlement colony near Choglamsar village, 10 kms from the town, though many villages, largely in the Khalse block, also suffered heavy losses. Hundreds of houses have been totally washed away and many more severely damaged. The floods had a heavy toll on farmers as their crop fields with standing crops have been washed away. More than 200 people have been confirmed dead and around 500 are still missing.





The magnitude of the disaster is too huge for the local people and the administration to be of a substantial help to those who have lost their family members and houses without external help, and hence this appeal for help in rehabilitation of the flood affected families. While any amount of financial help can't bring back their loved ones, it could definitely help in our mission of getting back a basic shelter for some of those who lost their houses completely before the onset of the harsh winters in less than two months from now.

CDD Society's network partner, LEDeG which is based at Leh has launched a rescue operation and is working tirelessly towards the rehabilitation of the flood affected people. LEDeG is planning to use most of the funds which are raised in building basic two-room sets along the principles of energy efficiency and disaster preparedness. It is our sincere appeal to all of you to please come forward and donate funds towards the noble cause of saving lives. If you wish to show us your generosity, please get in touch with CDD Society.

**CDD Society is pleased to welcome 3 new members in the network:**

**Reflow (DSTS- Decentralised Sewage Treatment System)** : Reflow is a legacy organisation of Good Earth Consultants, formalised in 2008, with the object of utilising wastewater. Reflow offers design consultancy services for wastewater treatment (DSTS) with a focus on sustainability and environmental soundness in design approaches. Contact: Mr. Anuj Malhotra [www.reflow.in](http://www.reflow.in)

**EcoPro** : EcoPro is a unit of Aurore Trust, a business Trust under the Auroville Foundation. EcoPro is involved in ECOSAN programmes, coordinated DEWATS projects, UNICEF-funded programmes for integrated WRM and, in general, varied projects such as water supply, sanitation, toilets, WWT and reuse, RWH and eco-landscaping. Contact: Dr.Lucas Dengel [www.auroville.org.in](http://www.auroville.org.in)

**CfID (Centre for Integrated Development)** : CfID is a partnership firm involved in concept development, design and implementation of DEWATS. It has worked with Hunnar Shaala, a CDD Partner, for technical designs of DEWATS and attended the CDD Engineers' Training Programme in May 2010. It has prepared DEWATS projects for Kadi Municipality and SWM projects for 5 towns in Gujarat. Contact: Mr. Tapan Patel [www.cfid.org.in](http://www.cfid.org.in)

## INTERESTING LINK

<http://www.idrc.org.sg>

The International Development Research Centre (IDRC) is a Crown Corporation created by the Parliament of Canada in 1970 to help developing countries use science and technology to find practical, long-term solutions to the social, economic, and environmental problems they face. Its support is directed towards creating a local research community whose work will build healthier, more equitable, and more prosperous societies.

## QUIZ

Q: For Developing countries, which sector uses the most water?

Hint: <http://www.splash-era.net/quiz/quiz.php>

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