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## PROLOGUE

A VERY HAPPY NEW YEAR!

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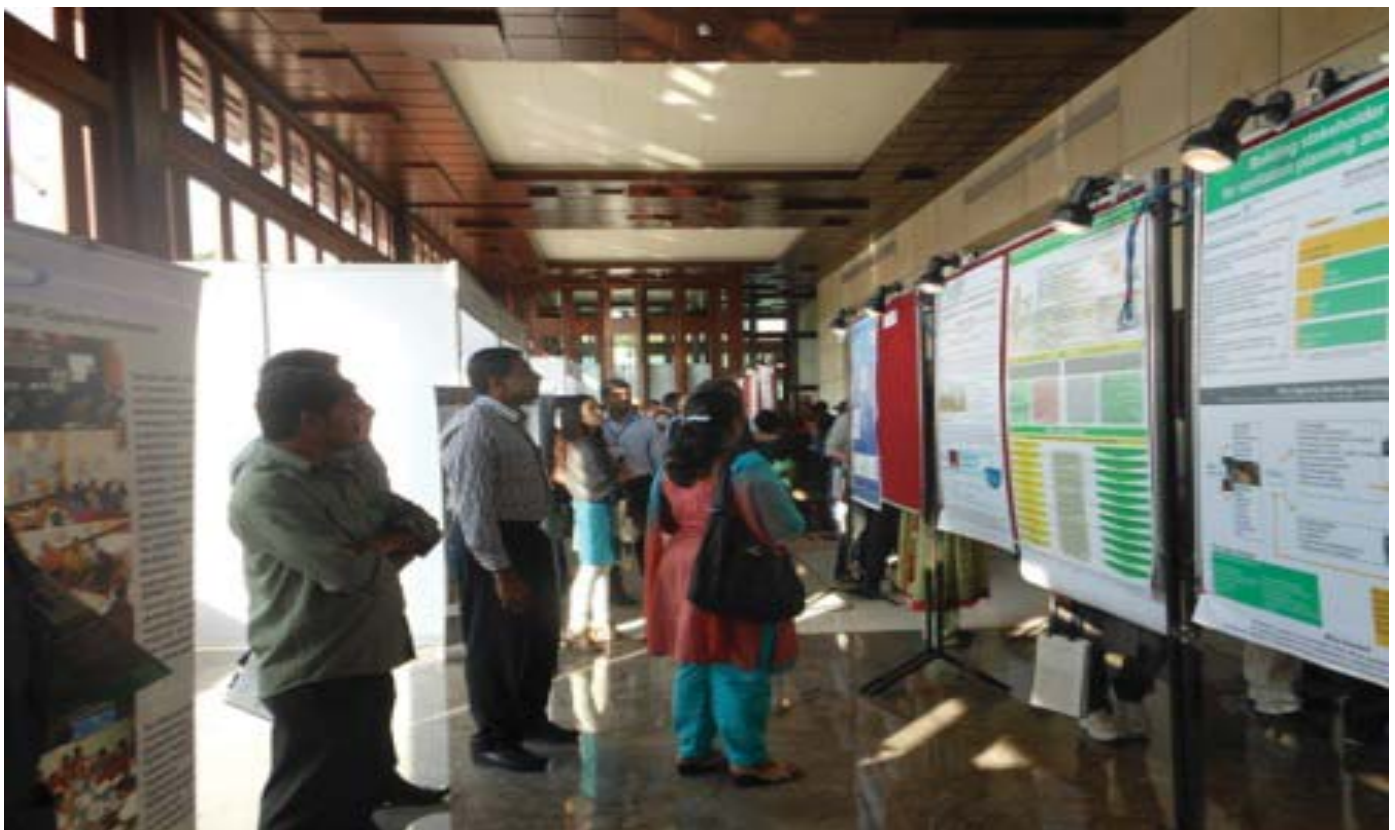
Annual Review and Planning Meeting of CDD Society, Bangalore

## INTERESTING LINK

United Nation Documentation Centre on Water and Sanitation (UNDCWS)

## QUIZ

Test your knowledge...



*Poster presentations in IWA Conference at Nagpur*



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## PROLOGUE

A VERY HAPPY NEW YEAR!

Welcome to the January issue of 2013 e-Disha. This issue provides information on our Annual Review and Planning Meeting and our participation in the IWA conference. It also includes a very informative interview on laboratory scale measurement of Biochemical Methane Potential (BMP).

Contributions to the Newsletter are most welcome. We would appreciate your comments on any articles which may be forwarded to [bangalore@cddindia.org](mailto:bangalore@cddindia.org). We look towards receiving your constant support and encouragement in all our endeavors.

Editorial Team  
e-DISHA

## PICTURE OF THE MONTH

### The Annual BORDA Basic Needs Services (BNS) Partner Meeting 2012 held in Bangalore

The Annual BORDA Basic Needs Services (BNS) Partners Network Meeting 2012 was successfully held in Bangalore from 26th through 28th November, 2012. The total number of participants were 60 including representatives from BORDA Headquarters, Bremen, BORDA Partner organisations from South Asia, South-East Asia, Afghanistan and the Southern African Development Cooperation (SADC) area.

Mr. Stefan Reuter, Director, BORDA, presented the keynote address emphasizing the history of BORDA, trends and outlook, major areas of involvement and main achievements of BORDA till date. During the meeting the subjects of discussion were: Performance of DEWATS for sustainable O&M and institutional management, R&D activities in BORDA regions, scaling up DEWATS through Prefabrication, Monitoring and Evaluation, Database management, Knowledge Management and Documentation, strategies for fostering technical and managerial professionalism and Decentralised Solid Waste Management (DESWAM) .



*Participants of the Annual BORDA BNS Partners Meeting*

Each BORDA region presented its achievements for the year 2012. A visit to the Centre for Advanced Sanitation Solutions (CASS) was also arranged on the second day. On the third day, the session came to an end with the discussion on way forward in understanding and visualising beyond DEWATS.

The Meeting provided an excellent platform to all the BORDA partners for sharing experiences and lessons learnt with the aim of providing better solutions in achieving the established targets and goals.



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## PROJECT FACT SHEET

**DEWATS unit at Salokhe Park, Kolhapur, Maharashtra**

<http://cddindia.org/images/joomd/1342856521SalokheParkIIYW.pdf>

## RESEARCH ON SANITATION

**An Exploratory Study on Wastewater Irrigation in Gujarat – A draft report**

The large proportion of untreated wastewater flowing out of urban centers is disposed in surface water bodies or open lands. There is an urgent need to draw attention towards wastewater as a resource and accord it the importance it deserves with growing scarcity and pollution of water. This study by People in Centre Consulting was funded by International Water Management Institute (IWMI). It highlights the regulatory aspects of wastewater reuse, history and management of wastewater irrigation, evidences reinforcing significance of wastewater irrigation for farmers and salient features of cropping pattern and some of the key factors driving increasing use of wastewater for irrigation.

Read more....

[http://www.peopleincentre.org/documents/2012\\_Highlight-30.pdf](http://www.peopleincentre.org/documents/2012_Highlight-30.pdf)

## DBNS ELEMENTS

### **Processing of Solid waste- Composting**

In the previous issues of e-Disha (Volume 10, Issue 5 & 6), the components of Decentralised Solid Waste Management (DESWAM) systems like segregation of solid waste (SW) at source and the various collection and transportation modes to the processing unit were discussed. In this issue, we discuss the basic concept of processing of organic solid waste through composting.

### **Composting**

Composting is the natural process of rotting or decomposition of organic matter by microorganisms under controlled conditions. Raw organic materials such as crop residues, animal wastes, food wastes, some municipal wastes and suitable industrial wastes, enhance their suitability for application to the soil as a fertilizing resource, after having undergone composting.

There are three kinds of composting:

1. Aerobic composting (composting with air – in the presence of oxygen)
2. Anaerobic composting (composting without air – in sealed spaces)
3. Vermicomposting (composting that is speeded up by earthworms)

### **Aerobic Composting**

The waste being generated and received at the processing site is composted aerobically. The composting process makes the waste inert. The aerobic composting process involves placing the waste into long heaps of waste formed in a trapezoidal shape of base 4-5m and height of 2.5-3 m called windrows. The dimensions would vary depending on the volume of waste to be handled per day. The windrows are placed on a specially constructed concrete platform. The waste is turned every 6-7 days over a period of 6 weeks. The turning of the waste is done using frontend loaders. After this the material will be stored under shelter for a period of 1 week. In this process the material gets stabilized. Addition of microbial cultures like cow dung slurry or special cultures can speed up the degradation and with adequate turning the stabilisation process can be completed in 30 days.



The stabilised materials are sieved using 50 mm and 25 mm sieves. The materials not passing 50 mm are sent to landfill as reject. The resultant compost is a rich source of organic matter.

Read more in next issue...

**Reference:** A Report on “Karnataka State Policy on Integrated Solid Waste Management” by KUIDFC.

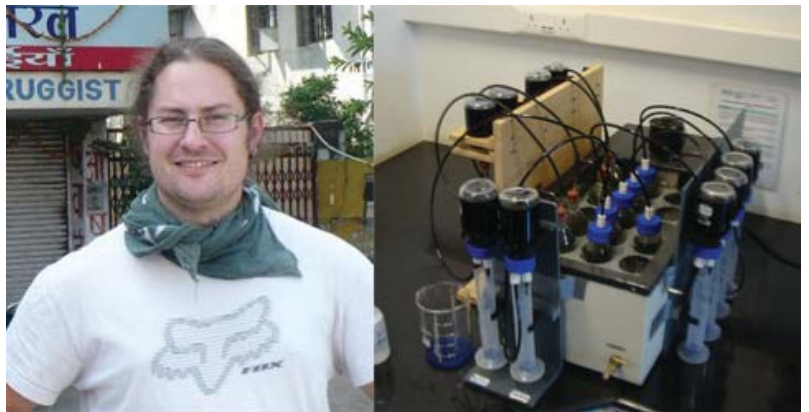
## INTERVIEW

**An interview with Mr. Bjoern Pietruschka about Biochemical Methane Potential (BMP) measurement in CASS laboratory**

### Background

CDD Society is conducting R&D activities to evaluate performance of anaerobic treatment of DEWATS™. Biochemical Methane Potential (BMP) measurement is one of the analysis techniques carried out as a part of R&D.

Mr. Pietruschka was recently at CDD Society supporting the improvement of the measurement and analysis technique of the existing Biochemical Methane Potential (BMP) setup in the CASS laboratory of CDD Society. In this interview, he shares his experience on the measurement technique.



Mr. Bjoern Pietruschka and BMP prototype at CASS Laboratory

### 1. Brief us about yourself and your research experience

I have completed a Bachelor of Engineering in Biotechnology from HFU Furtwangen in Germany. I have four years experience as an R&D Engineer in Immunology and Pharmaceutical Research in Germany. As a part of my Master's thesis, I am working on analysing BMP for different ABR sludge samples. Recently I presented a paper on BMP set-up at the IWA Conference 2012 in Nagpur.

### 2. How will the BMP measurements support the performance evaluation of anaerobic digestion?

The measurement of BMP will further help in measuring anaerobic sludge activity and with the help of a pool of results; a relation between Chemical Oxygen Demand concentration and sludge activity could be determined. These measurements also help to determine the biogas (mainly methane gas) generation from the anaerobic activity of methanogenic bacteria.

### 3. What are your recommendations for improving the existing BMP protocol set up?

The existing BMP protocol set-up has a few design flaws exhibiting the lack of air tight conditions. In order to make bottles airtight and user-friendly, needles could be replaced with airtight screw caps. Regular soap test should be performed to check for any gas leakage from the reactor bottles during the experiment.

## News and Views

### Training programme for Engineers on “Design and Implementation of DEWATS™”

In collaboration with BORDA and Rajiv Gandhi Rural Housing Corporation Limited (RGRHCL), CDD Society organised a training programme for Engineers’ titled “Design and Implementation of DEWATS™” from 3rd to 8th December 2012 at the Centre for Advanced Sanitation Solutions (CASS) in Bangalore. The residential training programme had 17 participants including engineers, designers and project managers from India and Afghanistan.



*Feasibility study conducted by Participants for an institution, Bangalore*

The participants’ expectation, to learn how to design a DEWATS™ on their own, was effectively met. Since most participants had been working for government bodies or consultancy firms for many years, they shared their experiences during the training sessions. The resource persons for this training programme, Susmita Sinha, Rohini J, Andrews Jacob, Rajesh Pai, Avinash Reddy and G. S. Santosh, energetically delivered CDD Society’s knowledge in decentralised wastewater treatment in nine sessions during the six-day training. The sessions were a mix of theory, computations and field work increasing the confidence of the participants to design DEWATS on their own and to adapt the modules according to the local conditions in their country.

### Conference on “Decentralised Wastewater Management in Asia – Meeting Urban Sanitation Challenges at Scale”, Nagpur, India, 20-22 November 2012

The Conference on “Decentralised Wastewater Management in Asia - Meeting Urban Sanitation Challenges at Scale”, which successfully concluded at Nagpur, India, on 22nd November, 2012, was co-organised by BORDA, CDD Society and the National Environmental Engineering Research Institute (NEERI) and supported by the Ministry of Urban Development, Government of India, the German Federal Ministry for Economic Cooperation and Development (BMZ), International Water Works Association (IWWA) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).



*Welcome Session of the Conference*



The Conference was attended by over 200 delegates from 30 countries. There were 50 oral presentations including 18 poster presentations. The Conference examined decentralised approaches for wastewater management, not only from a technical and engineering perspective, but also included social, institutional and financial aspects. The presentations and discussions centred on topics like policies, standards and regulations, planning, management, technology developments, design and construction, financing, stakeholder engagement and sustainability.



**Exposure Visit to Community based Sanitation-DEWATS project at Nagpur**

BORDA and CDD Society had set up exhibition booths which provided appropriate platforms for networking. One of the Conference highlights was the session on the different approaches to decentralised wastewater treatment and management, organised at the “real” field location. The one and half hour field session showcased severally the community based sanitation (CBS) approach in a low-income community in Mahajan Nagar, an SME DEWATS™ at the Vocational Training Institute, Lonara and Phyto-remediation Treatment at the Agricultural University respectively. This provided the participants an opportunity to interact with the stakeholders and have a ground-level experience.

### **Annual Review and Planning Meeting of CDD Society, Bangalore**

The Annual Review and Planning Meeting 2012-13 was held from 15<sup>th</sup> – 17<sup>th</sup> December, 2012 in Bangalore. The Meeting was attended by all staff members of CDD Society head office Bangalore as well as Regional Office at Nagpur.



**Participants of CDD Society Annual Review and Planning Meeting**

The first day of the three-day meeting emphasized the overall goal and objectives of BMZ Program Phase IV (2012 – 2014), with a recap of the BMZ program. A review was presented on Result-wise achievements for the year 2012 by the Management team. A session consisting of group activities was conducted to discuss the outcomes, constraints faced and lessons learnt in 2012.

Day one ended with the presentation of Work Group output and handing over the “Sustainability Cup for 2012” to the Capacity Building Unit for contributing the maximum in making CDD Society self-sustainable.



The sessions of the remaining two days focused on strategic planning and discussion of the long-term (2020) and short-term (2013) commitments of CDD Society. Team wise planning for the year 2013 along with the presentation was conducted.

There were many energizing team building exercises along with a feedback session in the end for better team rapport, coordination and communication amongst various team members. CDD Society is looking forward to a successful and rewarding year ahead.

## INTERESTING LINK

### UN Documentation Centre on Water and Sanitation (UNDCWS)

UNDCWS is developed by the UN Water Decade Programme on Advocacy and Communication (UNW-DPAC) with the support of the Municipality of Zaragoza, Spain. The UN Documentation Centre on Water and Sanitation (UNDCWS) acts as a clearinghouse on water and sanitation-related information materials produced by the United Nations system (programmes, agencies, etc.). The UNDCWS facilitates search, increases dissemination and improves visibility of UN information materials on water and sanitation by facilitating online and off-line access to these materials.

<http://www.zaragoza.es/ciudad/medioambiente/onu/en/about.htm>

## QUIZ

**Q: How much amount of water is embedded in everyday life?**

**Hint: <http://environment.nationalgeographic.com/environment/freshwater/embedded-water/>**

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