PROLOGUE

New Year Greetings!

PICTURE OF THE MONTH

World Toilet Day 2014 event organised by CDD Society on 19th November at Rangasthala, M. G, Road Metro Station, Bangalore, based on the theme of Open Urination.

RESEARCH ON SANITATION

Sanitation Vulnerabilities - Women's stresses and struggles for violence-free sanitation

NEWS AND VIEWS

CDD Society's participation and interactions at the National Conference - SANICON

PROJECT FACT SHEET

Pilot Septage Treatment Plant (STP) at CASS, Bangalore

INTERESTING LINK

India Sanitation & Toilet Summit - 2015
The year 2014 was one of hard work and great challenges for CDD Society. We would like to thank all our partners, donors and the training participants for their support and contribution towards making great strides this past year in providing decentralised basic need services for sanitation. This issue highlights the World Toilet Day event and participation at the National Conference on “Recent Advances in Biodegradation of Human Waste”, SANICON.

If you wish to comment on any article or submit articles for the next issue please forward them to bangalore@cddindia.org

We wish you a happy and successful new year 2015!

e-Disha
Editorial Team

PICTURE OF THE MONTH

CDD Society organised the World Toilet Day 2014 event which comprised discussions, creative inputs and thought provoking ideas on public urination. The World Toilet Day was conducted from 1800-2000hrs on the 19th of November – at the Rangoli Metro Art Centre, M.G. Road, Bangalore. Over 30 participants joined the event including Karnataka State Pollution Control Board officials.
RESEARCH ON SANITATION

Sanitation Vulnerabilities - Women's stresses and struggles for violence-free sanitation

This publication summarizes the research findings of a Sanitation and Hygiene Applied Research for Equity (SHARE) and Water Supply and Sanitation Collaborative Council (WSSCC) funded study in India. The study sought to ascertain whether gender violence is symptomatic of power inequalities in society, manifest themselves in women's psycho-social stress and translate into women’s decisions about where to relieve themselves.

It was presented at the UNC 2014 Water and Health Conference: Where Science Meets Policy and the Sanitation and Women in India: Research Findings Conference held in Delhi, India, 7-8 November 2014.

Read more:

http://www.shareresearch.org/LocalResources/Vulnerabilities.pdf

NEWS AND VIEWS

CDD Society's participation and Interactions at the National Conference – SANICON

Ms. Rohini Pradeep, CDD Society, presented a paper “Treatment of Septage at pilot unit in peri-urban locality of Bangalore” at the National Conference on “Recent Advances in Biodegradation of Human Waste”, SANICON 2014, Assam, India held during 16th through 17th December 2014.

The paper highlighted the status of septage management in India, pilot septage treatment plant at CASS and research outcome with further studies which are to be conducted for optimization of septage treatment process.

Read related article: http://www.cddindia.org/recentactivities_10.html
Project Background

This Project is implemented with financial support from Bill and Melinda Gates Foundation. The septage treatment plant at CASS, Bangalore, is a pilot intervention of CDD Society-BORDA as a solution towards arresting indiscriminate septage disposal practices in India. This project has been implemented with the aim of assessing the suitability of Decentralised Wastewater Treatment System (DEWATS™) in treating septage.

Project Description

Septage collected from septic tanks and pits using desludging vehicles are disposed at the plant. The STP includes:

**Feeding Tank (FT) with screen chamber:** Septage is fed into the prefabricated feeding tank through an inlet pipe. A screen chamber is provided in the feeding tank below the inlet pipe to separate any solid waste present in the septage. Post screening, the septage flows into the tank. Septage is further separated during a retention time of 3-4 hrs.

The supernatant from feeding tank is directly discharged into ABR and settled solids into Biogas settler for digestion respectively.

**Biogas Settler (BGS):** A prefabricated biogas settler is installed to digest the sludge from feeding tank anaerobically. Biogas produced is further collected and reused for cooking.

**Integrated Settler with Anaerobic Baffled Reactor (ABR):** The effluent from the biogas settler and supernatant from feeding tank enters the ABR (integrated with settler) for further settlement of solids and treatment.

**Planted Gravel Filter (PGF):** The effluent from ABR enters the PGF and is treated aerobically ensuring removal mainly of odor and color and partly of nutrients. Gravel of various sizes is used as a filter media and plant species like cana indica and papyrus are planted.

**Collection Tank:** The effluent from the PGF is collected in a prefabricated collection tank for use in irrigation and agricultural reuse and overflow is connected to the nearby sewer system.

**Sludge Drying Bed (SDB):** The digested sludge from the biogas is further treated at the SDB for removal of water (dewatering) and pathogens. The digested sludge from the SDB is used as a soil conditioner.

<table>
<thead>
<tr>
<th>Modules Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Screen Chamber</strong></td>
</tr>
<tr>
<td>Pore size</td>
</tr>
<tr>
<td>Size of chamber</td>
</tr>
<tr>
<td><strong>Feeding Tank</strong></td>
</tr>
<tr>
<td>Volume of Tank</td>
</tr>
<tr>
<td>Area of construction</td>
</tr>
<tr>
<td><strong>Biogas Settler</strong></td>
</tr>
<tr>
<td>Volume of Tank</td>
</tr>
<tr>
<td>Area of construction</td>
</tr>
<tr>
<td><strong>Biogas generated</strong></td>
</tr>
<tr>
<td>Anaerobic Baffle Reactor Volume</td>
</tr>
<tr>
<td>Area of Construction</td>
</tr>
<tr>
<td>Number of Chamber</td>
</tr>
<tr>
<td><strong>Planted Gravel Filter</strong></td>
</tr>
<tr>
<td>Volume</td>
</tr>
<tr>
<td>Area of Construction</td>
</tr>
<tr>
<td><strong>Collection Tank</strong></td>
</tr>
<tr>
<td>Volume</td>
</tr>
<tr>
<td>Area of Construction</td>
</tr>
<tr>
<td><strong>Total built up area</strong></td>
</tr>
</tbody>
</table>
Operation and Maintenance (O&M)

Regular O&M activities are carried out by trained staff of CDD Society

Operation tasks:
1. Documentation of septage characteristics
2. Cleaning of screen chamber
3. Operation of valves
4. Regular (influent and effluent) sample collection for assessment of treatment efficiency

Maintenance tasks:
1. Regular desludging of BGS
2. Removal of sludge from SDB
3. Harvesting of plants in PGF

Reuse of treatment by-products

The treated effluent from the collection tank is reused in gardening

Biogas generated from the biogas settler is used as fuel for cooking

The digested sludge from SDB is used as a soil conditioner

INTERESTING LINK

India Sanitation and Toilet Summit - 2015

India Sanitation Summit is a unique national level event and the 1st conference of its kind in India to be organized by India CSR Group. The event intends to establish a platform of brainstorming by concerned experts and stakeholders. It will be held in early February to usher an era of change by converging attention and focus of development professionals, social scientists, politicians, organization leaders and other change agents to this much neglected issue “Sanitation and Toilet for All”

Link: http://www.indiasanitationsummit.indiacsr.in/