ANNUAL REPORT

2015-2016

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FORE WORD

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Since its inception as an informal organization comprising of organisations and individuals who assembled and worked together to promote the idea of decentralized basic needs services, the journey to an 80-strong organisation has not been the easiest though the experience was undoubtedly exciting. Looking back on the past 10 years, CDD began by strategically promoting DEWATSTM as a proven and viable compliment to centralized sanitation systems. The MDGs, to which Germany and India were signatories, provided the opportunity to scale up dissemination of DEWATSTM. However, CDD Society soon learnt that the efforts, however sincere and dedicated, would not achieve the desired impact of scale. This hence called for diversification to city-level sanitation planning (CSP) in 2006 with a sanitation plan for Pune City.

While successfully completing a number of DEWATSTM and CSPs and keeping in the forefront of developments in the sector, CDD Society realized that it must build capacities to increase expertise in the provision of sustainable sanitation solutions through training and other Capacity Building (CB) measures. It was also realized that operation and maintenance (O&M) is crucial to ensure that improved sanitation infrastructure is sustained through custom-designed knowledge transfer and capacity building.

The demands of the sector changed and grew appreciably calling for further diversification into areas of FSM in 2014 calling for larger collaboration with governments, ULBs, funding support agencies and the larger civil society.

A significant development in 2008 was the collaboration (MOU) entered into with RGRHCL (Rajiv Gandhi Rural Housing Corporation). Under the collaboration, the Centre for Advanced Sanitation Solutions (CASS) was established as a unique facility – a one stop shop - to showcase all aspects of sanitation aspects under one roof. All CDD Society operations were carried out from CASS – the secretariat office, a laboratory, the Capacity Building centre and a permanent sanitation exhibition hall. RGRHCL made available its premises in Kengeri Satellite Town in the southwest of Bengaluru City. From 2012, CDD Society set up its own prefabrication unit for the development of DEWATSTM and other sanitary modules. This was established on the CASS premises made available by RGRHCL.

CDD Society's other significant collaborations are with the EU, Asia Development Bank, WSP (Water and Sanitation Programme of the World Bank), BMGF (Bill and Melinda Gates Foundation), governments in the SAARC countries and several others.

In the area of funding support and generation of income from other sources, BORDA, being the main donor, played the most important role. CDD Society has gradually reduced its dependence on BORDA while significantly increasing the share from other sources through the above-mentioned collaborations; suffice to mention that the budget of Rs 18.68 lac in 2005 increased to Rs 757.00Lac at present, a major share now being from sources other than BORDA.

CDD Society's HR base has grown appreciably in strength, level of academic background and expertise. It now boasts of a highly varied HR base of 70 staff which is considered as an invaluable investment towards achieving the aims, objects and set goals while moving the organization towards financial self-sufficiency in all aspects of its work.

It would be unfair not to place on record the contributions of BORDA, specifically, Mr. Pedro Kraemer till 2011 and Mr. Stanzin Tsephel who continues to provide invaluable support to CDD Society. Following periods of instability in the leadership within the organization, a new CEO, Mr. Sasanka Velidandla, has been assigned the responsibility of carrying CDD Society into the next decade.

CDD Society looks forward to the support of funding agencies, especially BORDA, its own members, the Governing Body, clientele and the larger civil society in its march forward to the next decade and beyond.

DEFINITIONS & ABBREVIATIONS

CDD	Consortium for DEWATS Dissemination
CBS	Community based sanitation
DESWAM	Decentralised Solid Waste Management
FSM	Faecal Sludge Management
O&M	Operation and Maintenance
ADSIS	Association for Decentralised Sanitation Infrastructure and Services
STP	Sewage Treatment Plants
UGD	Underground Drainage
ULB	Urban Local Bodies
SWM	Solid Waste Managment
CSP	Citywide Sanitation Planning
BMGF	The Bill and Melinda Gates Foundation
NSSWS	National Summit on Sustainable Water & Sanitation

1 ABOUT CDD SOCIETY

"To improve the environmental, economic and social conditions of the society through development, promotion and dissemination of appropriate, decentralised and affordable 'Basic Needs Services"

The United Nations Brundtland Commission Report from 1987 declared that "sustainable development requires meeting the basic needs of all and extending to all the opportunity to fulfill their aspirations for a better life". The formalization interlinked the approaches of environment, society and economy to find sustainable solutions to an increasingly global problem and laid the basis on which the Consortium for DEWATS Dissemination (CDD) Society has built up its engagement in South Asia since 2001.

Environment

Focusing on the treatment of wastewater and faecal sludge and advocating the use of natural and biological treatments in the form of anaerobic and aerobic treatment technologies.

Social

Disseminating knowledge as the key method to involve local administration and communities to create an understanding for environmental and health protection.

Economic

Promoting the idea of low operation and maintenance charges as well as simple technical know-how to benefit service providers and end-users across the sanitation value chain.

2 INTRODUCTION

Progress is impossible without change, and those who cannot change their minds cannot change anything.

-George Bernard Shaw

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2 INTRODUCTION

Our Mission

What happens after the flush?

Where does it all go? Is it going into a sewer system, is it being treated or is it being dumped into the environment? With a growing number of people moving to India's cities and with expansion becoming unmanageable, the answers to these questions become critical to understand how we can work towards a healthy environment.

Release of untreated liquid and solid waste pollutants to the immediate surroundings of a community directly threatens the life and wellbeing of the entire ecosystem - humans, animals, and plants. CDD Society believes that its mission to preserve natural resources and the environment can only be achieved by promoting social and economic development through the provision of basic needs services, such as sanitation.

3 GRANT PROGRAMMES

|3.1|
Poverty Alleviation and Sustainable Protection of Natural Resources in South Asia (Phase V – 2015 to 2017)

Overview

Initiated in 2003, this project is aimed at improvement in the living conditions and protection of natural resources in underserved urban, peri-urban and rural settlements in South Asia. The project intends to achieve this through the provision of decentralised basic needs services like community based sanitation (CBS) models with community driven sanitation infrastructure and services for wastewater management (DEWATS-CBS) and solid waste management (DESWAM), wastewater management in small and medium sized enterprises (DEWATS-SME), cluster based approach for Decentralised Solutions on Settlement Hygiene and Wastewater Management (DELSA) service packages, and citywide planning tools for integration of decentralised approaches in mainstream sanitation planning for larger impact. The project objectives will be achieved by undertaking a number of activities. These include conducting workshops/seminars to to disseminate basic needs services, capacity building of various stakeholders engaged in the sanitation sector, implementing pilot projects at various scales, lobbying with the government for the inclusion of decentralised sanitation approaches in city-scale service delivery, research and development etc.

The target groups for this project are poor residents of densely populated urban and peri-urban agglomerations which have inadequate or no sanitation facilities, public institutions (eg. schools, hospitals) and small and medium size companies which generate waste and contaminate natural resources due to a lack of liquid and soild waste treatment facilities. A special target group for this project are women and children since they are most vulnerable to being affected by inadequate basic needs services. Other target groups from a cooperation perspective are multi-sectoral stakeholders, public and private service providers, and national and international development organisations working in the field of basic needs services, wastewater and solid waste management.

The project has high relevance considering that the emphasis of local governments is usually on the construction of toilets whereas the next steps in the sanitation value chain, such as safe collection, transportation, treatment and disposal of faecal sludge/wastewater are grossly neglected. The conventional approach adopted by local governments towards wastewater management is implementation of extensive sewerage system and highly mechanised sewage treatment plants, which because of high costs and non-availability of technically skilled labour are not sustainable options and become defunct over a period of time. This project disseminates the "middle course" to fulfill the urban sanitation deficit - a path between the absence of sanitation and the "perfect" urban sanitation solution by proposing decentralised and simplified technical approaches for liquid and solid waste management.

The fourth phase of the project (2012-2014) mainly focused on organisational and financial scaling-up of the project team and its co-operative areas.. Thanks to these efforts, CDD Society, its partner network and trained participants have the ability to implement small DEWATS on a large scale across various sectors and regions. The current phase of the project (2015-2017) will focus on shifting from privately-funded single systems to government-funded cluster systems and the team will focus on the development of the sector, especially with regards to creating a politically supporting environment and engaging private players in the sanitation sector. Also, the focus shall be on the implementation of cluster DELSA in specific cities for demonstration purposes.

3 GRANT PROGRAMMES

The Way Forward:

In the coming years, CDD Society aims to emerge as one of the key players for Faecal Sludge Management (FSM) against the background of the Indian Government's massive plans to achieve the objectives stated under the Swachh Bharat Mission by 2019. With this endevour, CDD Society will have to focus on building internal capacities and lobby aggressively with governments to leverage the sector and play a leadership role. Further, it is perceived that the implementation of cluster DELSA packages will create larger impact at city or town level, however there could be resistance considering decentralised approaches may upset the current infrastructure and practices (of underground drainage and centralised systems being synonymous with development) followed by the towns.

Further, the norms for discharge of treated wastewater into the environment are getting stringent. The DEWATSTM has to be accordingly modified to achieve the discharge standards, else it would become difficult to sustain in the sector.

IMPACT OVERVIEW

Environmental Impact

CDD Society, its network partners and trained participants have implemented 102 projects, which have helped in the protection of water bodies and other natural resources.

Social Impact

The interventions by CDD Society and its partners have positively impacted lives of around 70,456 beneficiaries through the provision of better sanitary services mainly pertaining to domestic wastewater management.

3 GRANT PROGRAMMES

|3.2|

Strengthening the Operation and Maintenance Sector for Servicing Decentralised Urban Sanitation Infrastructure in Karnataka, India

Overview

The current scenario of wastewater infrastructure in India has primarily focused on centralised treatment systems, which demand high Operation and Maintenance (O&M). Decentralised systems require lesser O&M in comparison to centralised systems. Given the lack of professional service providers, this programme focuses on scaling up the O&M sector for decentralised urban sanitation infrastructure.

A landscape study across Bangalore was undertaken by CDD Society. This study, which comprised of conducting a detailed assessment of prevailing O&M practices for urban decentralized sanitation infrastructure, helped identify needs and gaps. As an outcome, 8 service packages were shortlisted in consultation with the advisory board. The landscape study has also been instrumental in getting a larger picture of FSM in Devanahalli , which has gone a long way in bringing about policy changes and development in the town. The document is not ready for publication in its present stage and time has been allocated for this purpose in the next period.

Of the many activities that were carried out in the preceding phase, certain key activities played a bigger role in achieving the overall aim of strengthening the sanitation sector in a sustainable manner. These key activities were:

Entrepreneur development CUBE Sanitation Services	Establishment of Service Providers Association ADSIS	Drafting of Faecal Sludge Management Policy Note	Setting up a Faecal Sludge Treatment Plant

Entrepreneur development CUBE Sanitation Services

Technicians from CUBE Sanitation Services (which was formed in April 2015) were trained and supported by CDD Society/ BORDA to provide Operation & Maintenance services for DEWATS along with desludging of septic tanks and pits. Main activities for the year included:

40 loads desludged from three DEWATS units	18 loads of solid waste leachate collected from local BBMP	O&M of a Planted Gravel Filter (PGF)	Generated revenue of Rs.1,75,000/-

3 GRANT PROGRAMMES

ADSIS

Set up in early 2015, Association for Decentralised Sanitation Infrastructure and Services (ADSIS) is a platform for small and medium scale service providers engaged in installation, operation and maintenance of sewage treatment plants (STPs) to come together and collectively address the existing challenges (of the sector/they face) through an institutionalised forum.

Highlights

* 36 members (sign/join/come on board)
* 4 consultation meetings held.
* Dedicated website launched: www.totalsan.com
* Governance structure finalized and registration process completed
* Action plan for 2016

Policy implementation

In the advocacy phase, the team had approached government officials aware of the importance of FSM. Support by BORDA LO, National Law School University and a closed group of experts, the officials developed a draft policy and operative guidelines on Septage/Fecal Sludge Management for Devanahalli, a town in Karnataka.

ADSIS

The plan to implement a septage treatment plant in the year 2014 in Anekal was dropped due to the installation of an underground drainage (UGD) system with treatment plant for the township. The decision for a UGD was passed suddenly by the government and was implemented just as quickly. An alternative site was thus selected at Devanahalli with support from the programme's Advisory Board. The Devanahalli Town Municipal Cooperation has been highly engaged and dedicated with regards to implementation of the septage treatment plant. Their enthusiasm resulted in the setting up of India's first dedicated Faecal Sludge Treatment Plant, which was inaugurated on World Toilet Day 2015. The treatment plant ensures safe treatment and disposal of sludge collected in septic tanks and pit latrines.

Highlights

* The plant caters to a population of ~30,000 people.
* 1.6 lakh litres of faecal sludge have been treated in a span of 88 plant operational days.
* 7.1 m3 of water has been obtained for reuse from the treatment plant
* 800 kg of dry treated sludge has been given to farmers for reuse in agriculture, helping them improve productivity on their fields.

3 GRANT PROGRAMMES

Case Study

The town of Devanahalli, situated at a distance of 39 km from the city of Bangalore, the was selected for the project and case study. Located ~10 kms from Bangalore International Airport, Devanahalli comprises of 6,400 households, which are spread across its 23 wards. Thanks to its proximity to the airport, Devanahalli is witnessing a burgeoning of commercial and residential establishments. Like most developing towns, its sanitation infrastructure is unable to keep pace with its growth. This has lead to environmental pollution, which has implications on human health.

A number of treatment methodologies ranging from mechanical treatment systems like LaDePa (a fecal sludge pelletisation process) to non-mechanical treatment systems like sludge drying bed (planted and unplanted) were explored for their suitability for Devanahalli. Though mechanical treatment systems are known to be efficient in treating faecal sludge, they turned out to be economically unsuitable for Devanahalli owing to the high energy requirement to operate them. Non-mechanical plants, on the other hand, such as drying beds require low energy;though they require a larger space and may encounter frequent clogging issues. Based on these learnings, a combined approach of DEWATS principle, solid-liquid separation, anaerobic digestion, dewatering and pathogen removal was adopted.

Way Forward:

1. Assist Urban Local Bodies (ULBs) for on ground implementation of Solid Waste Managment (SWM) and Swachh Bharat Mission (SBM) policies.
2. Effectively operate the Faecal Sludge Treatment Plant (FSTP) and ensure reusability of its by-products.
3. Train cesspool vehicle operators on operations and safety protocols.
4. Conduct trainings for masons and contractors on construction standards for toilets and pits/septic tanks.
5. Design a GIS map based on collated survey data for continuous monitoring of the sanitation situation.
6. Draft better desludging guidelines and spread community level awareness through outreach activities.

IMPACT OVERVIEW

Environmental Impact

Untreated faecal sludge contains harmful pathogens, bacteria and viruses which cause communicable diseases through body contact and ingestion of contaminated water. FSM reduces the count of these pathogens to standard levels and prevents contamination to human or animal bodies.

CHALLENGES & LEARNINGS

FSM - Challenges

1. Coordination with the local operators for plant operations.
2. Hierarchical obstruction while coordinating with the government.
3. Lack of strong technical and liaison staff.

ADSIS - Challenges

1. Driving and managing continuous momentum across members.
2. Coordinating with Government agencies to meet timely deadlines
3. Creating ownership amongst members
4. Getting desired outcomes only after much hand-holding

3 GRANT PROGRAMMES

|3.3|

Nexus- Food Production and Settlement Hygiene in Poor Peri-Urban Regions in India

Overview

The Nexus project, which is about Food Production and Settlement Hygiene in Poor Peri-Urban Regions, has been operational in India since January 2015. It is a three year project scheduled to end in December 2017. The overall development objectives of the project are: a) Improving health through reduction in undernourishment; b) Reducing environmental degradation and protecting natural resources; c) Improving living conditions of poor peri-urban communities. Specifically, the project aims at closing the sanitation, agriculture and nutrition loops through improvement of sanitation and hygiene aspects and reuse of treated waste/wastewater in food production in peri-urban communities.

After an extensive literature review on the practice of wastewater reuse in agriculture, covering topics like a) Health impacts of wastewater reuse in agriculture; b) Impact on soil and crop quality and c) Technological options to treat domestic wastewater, the programme team created and detailed out the Log-Frame analysis which helps in developing an enhanced understanding on the key result areas and what is needed to accomplish the same. A major step to achieve targets set in the Log-Frame was to formulate partnerships with EcoPRo from Auroville and St. John's Medical College, Bangalore.

For the first pilot implementation, Beedi Workers Colony was identified as a suitable location for agricultural reuse of the treated wastewater. The next step was to create a detailed crop production plan. This was followed by land preparation, sowing and finally collecting produce from 21 harvests. The produce included tomatoes, aubergines, chillies and beans. The vegetables grown were mainly given to the anganwadi at Beedi Worker's Colony to feed its 45 kids; the rest were given to families, selected after consulting with the community leader. Meanwhile the implementation process of Ecological Sanitation with reuse of urine and human manure was taken up by partner organiation EcoPro in Auroville.

IMPACT OVERVIEW

The overall impact assessment of the project is to be completed in the year 2016 and 2017 since the implementation of two concepts began only in the last quarter of 2015. The monitoring and evaluation plan specific to each pilot site are under preparation and will be implemented during the course of intervention this year.

CHALLENGES & LEARNINGS

The points mentioned below listsout the different challenges the team has faced; in some cases, the team is still struggling with these challenges during project implementation.

POLICY

1. Grey areas in policy and regulations on reuse
2. Limited availability of literature focusing on the Indian scenario
3. Little research on long term impacts of reuse

PLANNING & IMPLEMENTATION

1. Limitations of laboratories that test wastewater, sludge, crops
2. Low knowledge and interest amongst communities, local leaders and institutions which results in operational hurdles

KNOWLEDGE

1. Complexity of project linking nutrition, food production, and health
2. Monitoring and assessing interlinkages
3. Low awareness amongst the public about the topic

3 GRANT PROGRAMMES

|3.4|

Tamil Nadu Urban Sanitation Support Programme (TNUSSP)

Overview

The need for the project highlights the increasing investment in the field of FSM in the country. Being a lead driver of FSM initiatives in India, the Gates Foundation has chosen to provide technical support for FSM interventions in Tamil Nadu; these interventions would stand as a pilot and pathway for other states to follow. Only 14.8% of urban households have access to sewerage systems, this gives us around 68 % of households having onsite sanitation systems which need FSM interventions.

CDD Society is developing a compendium of technology options, which will cover a number of components in the sanitation value chain. This compendium is contextual to the geographic and economic conditions for the state of Tamil Nadu. It aims to provide the user with a broad range of innovative sanitation systems and technologies that can be implemented on ground.

This document is designed to act as a reference guide and decision support tool to technical professionals of urban local bodies, sanitation practitioners and urban planners to select the appropriate technological intervention.
In addition to developing this compendium, other tasks under this project include:

* City sanitation planning with an emphasis on FSM
* Developing training modules for stakeholders and delivery of these modules
* Conducting baseline surveys of pilot towns and 21 ULBS
* Providing site supervision
* Providing expert support to TNUSSP

IMPACT OVERVIEW

Environmental Impact

The goal of this project is to make Tamil Nadu a pioneer in achieving the full cycle of safe sanitation in urban areas. The amount of untreated faecal sludge discharged into the open environment poses a serious public health risk, the consequences of which are astounding. There is a need to rethink our approach to sanitation. Faecal sludge managment is a new and rapidly developing approach and this compendium of innovative technologies will provide technology options that can be implemented on the ground and can help in treating and managing faecal sludge.

As part of this project, initiatives would be piloted at the following 3 places:

* Pilot City: Trichy % of onsite sanitation systems: 66.5%; Households: 3,42,041
* Pilot Town: Periyanaicken-palayam; Households: 7,223
* Pilot Town: Narasimhanaicken-palayam; Households: 4,776

Social impact

This compendium, which highlights innovations suitable for the local conditions in Tamil Nadu, will allow for a review of technologies for implementation. It will address gaps by enlisting various innovations in technology and thereby empower stakeholders to play an informed role in FSM planning.

3 GRANT PROGRAMMES

|3.5|
Small-Scale Sanitation Scaling-Up

Overview

Small-scale sanitation systems are currently at an inflection point. Over the past decade, they have proven to be a viable alternative to conventional large-scale centralised systems. Some of their most significant advantages are: flexibility, modularity, and cost-effectiveness. They can be implemented in stages and built to exactly meet people's needs, reducing the possibility of accruing idle capacity costs. However, in many countries, they are still not considered as proper treatment systems and are, therefore, commonly not acknowledged as capable of providing a proper alternative to large-scale systems. Even where wide-scale replication has succeeded, small-scale systems often suffer from the lack of proper management and insufficient monitoring schemes. In addition, donors lack guidelines on how to invest in and design scaled up small-scale sanitation projects and programmes. Scaling up such systems requires innovative management and institutional schemes, inclusion of the private sector, and innovative financing plans.

IMPACT OVERVIEW

The promotion of improved cost-effective wastewater treatment solutions for an urbanizing South Asia is of great importance. The detailed performance evaluation of existing decentralized treatment systems is hence expected to lead to better policies and future implementation. The main beneficiaries of this investment are thus urban and peri-urban residents who can´t realistically expect to be connected to centralized wastewater treatment systems in the near future. Secondary beneficiaries comprise planners, consultants, decision-makers and donors, e.g. from ULBs (Urban Local Bodies), technical and financial institutions (Pollution Control Board, Asian Development Bank), regulatory bodies (Ministries) as well as the private sector.

4 SELF SUSTAINABLE PROJECTS

CDD Society's self-sustainable projects focus on disseminating knowledge, experience and technologies based on local priorities and needs that fulfill the organisation's environmental and social goals. These projects have been initiated to respond to concerns that arise within communities, and fall in line with the policy of the society work beyond donor driven agendas. CDD Society supports the building of self-sustainable communities through training, knowledge sharing, consultancy services as well as research and development leading to the production of locally manufactured vessels for treating wastewater and septage.

4.1

Centre for Advanced Sanitation Solution (CASS)

The year 2016-2017 constituted an important period for the CASS /Capacity Building Unit. A lot of new opportunities in partnerships with various organisations came up. The Centre's portfolio and audience expanded with the water training programmes under The Ministry of Drinking Water and Sanitation's Key Resource Centre (KRC). The team worked to mobilise opportunities for new training programmes, for which they lobbied with government departments and private organisations at regional, central and international levels.

As part of CDD Society's endevour to offer the best quality of services to its clients, the Capacity Building Unit dedicated efforts to upgrading competencies of CDD Society's staff. In order to achieve the overall goal of performance improvement, in-house staff trainings to enhance the professional knowledge and skills both at individual and collective levels were organized. Some topics aimed at equipping personnel to respond appropriately to emerging challenges. The trainings also aimed at bringing about appropriate changes in attitudes and towards improving individual competencies along with promoting organisational objectives.

4 SELF SUSTAINABLE PROJECTS

TRAININGS

Sl. No	Particular	Information
1	BMZ - Conducted three training programmes	1. Faecal Sludge/Septage Management towards Sustainable Sanitation - 27th - 28th April 2015 (12 participants) 2. Engineers' Training on DEWATS - 7th - 11th Sept 2015 (20 participants) 3. Faecal Sludge Treatment technologies – 5th - 6th Jan 2016 (26 participants)
2	KRC -Conducted three training programmes	1. Rain Water Harvesting - 24th - 26th March 2016 (54 participants) 2. Water Quality – 29th February 2016 (12 participants) 3. Integrated Water Resources Management – 9th - 11th March 2016 (31participants)
3	EU - Conducted three training programmes	1. Faecal Sludge / Septage Management – 26th May 2015 (25 participants) 2. Citywide Sanitation Planning – 28th - 29th May 2015 (21 participants) 3. Simplified Sewer System 29th 30th October 2015 (21 participants)
4	BMGF – Conducted one workshop	1. Service Providers on Efficient Desludging Services – 12th August 2015 (13 participants)
5	Local Project - Conducted six training programmes	1. Engineers' Training on DEWATS™- Lebanon – 1st - 5th June 2015 2. Engineers' Training on Decentralised Wastewater Treatment Systems and its application in the urban context to Municipal Administration and Urban Development Department, Government of Andhra Pradesh,13th - 15th July 2015 3. Community Based Waste Management Training Programme for Centre for Advocacy and Research - New Delhi - 3rd - 5th August 2015 4. Three training programmes of one day each on Dual Piping and Decentralised Wastewater Treatment Plant Implementation and Maintenance for registered plumbers and contractors of Bangalore Water Supply and Sewerage Board (BWSSB) onducted from 29th - 31st March 2016

4 SELF SUSTAINABLE PROJECTS

1. In-house staff Capacity Building

An assessment of skill and knowledge was conducted for current in-house staff; taking direction from the assessment, sessions for both technical and soft skills are being planned and executed so far. These include:

Sl. No	Particular
1	Public speaking - four sessions held for 12 CDD in-house staff.
2	Technical two peer learning sessions were held.1.Sanitation Landscaping and 2.Familiarisation on concepts / definitions related to decentralised sanitation/wastewater,
3	Trainer development – Training Schedule is ready
4	Sanitation Safety Planning and its Application, which is part of the Nexus project "Food production and settlement hygiene in poor peri-urban areas", held on March 10th -11th, 2016 at CDD Society's conference hall. -18 in-house staff from different teams.
5	Orientation on AMRUT Guidelines for in-house staff, conducted by Emon Dastidar.
6	Training of Trainers on Menstrual Hygiene Management conducted by the Ministry of Drinking Water and Sanitation in collaboration with the Water Supply and Sanitation Collaborative Council was attended by one in-house staff
7	Online course on Faecal Sludge Management conducted by The Asian Institute of Technology (AIT), Bangkok is being attended by five in-house staff.
8	Six in-house staff attended The Sustainable Development Goals (SDGs) Training programme held at The Institution of Engineers, Bangalore
9	20 technical staff were oriented on SUSANA Network Platform
10	Training on Faecal Sludge Treatment Technologies for eight in-house staff
11	Around 60 in-house staff were oriented on The Sexual Harassment at Workplace Act
12	Four in-house staff participated in a 10 day training programme for Technologies and Business Development in Natural Wastewater Treatment at Yashada, Pune.
13	7 days of boot camp induction for engineers was conducted for 9 in-house staff

4 SELF SUSTAINABLE PROJECTS

2. Guest Lecture

A total of 11 guest lecturers, from 6 national and 5 internal speakers were organised during the year. Besides providing new information to CDD Society in-house staff, it helped the management to collaborate with guest lecturers as advisors on management issues and team building ideas.

Sl. No.	Date	Name of Lecturer	Details of the Lecturer	Topic of Discussion
1	January 29, 2015	Prof. Laurence William Gill	HOD – Dept. of Civil Structural & Environmental Engineering, and Director of MSc – Civil Engineering, Trinity College, University of Dublin, Ireland	Onsite treatment systems in Ireland and translation of applied research into practical guidelines and legal regulations
2	February 6, 2015	Mathew Eipe	Former Executive Director & President of Chemicals Division, Godrej Industries Limited	Lessons for management
3	February 12, 2015	Manas Rath	Director – Dasra Social-Impact and Portfolio, and Senior Social Sector Advisor	How to become a better professional: Advice for young professionals
4	March 2015	Ing. Günther Klatte	BORDA Nicaragua	BORDA Annual BNS meeting
5	April 7, 2015	Dr. Brian Von Herzen	Executive Director, The Climate Foundation, USA	Experience sharing on Faecal Sludge Management
6	April 10, 2015	Mr. Shubhagato Dasgupta	Senior Fellow, Centre for Policy Research, New Delhi	Evolution of Sanitation Policies and Programs in India
7	April 21, 2015	Dr.Jan-Olof Drangert	Associate Professor Department of Water and Environmental Studies Linköping University SE-581 83 Linköping Sweden	Sanitation Resource Recovery

4 SELF SUSTAINABLE PROJECTS

2. Guest Lecture

Sl. No.	Date	Name of Lecturer	Details of the Lecturer	Topic of Discussion
8	May 5, 2015	Ulf Dethmann	Engineering degree with a specialisation in Water and Soil Management from Leuphana University, Germany	Continuous sand filters
9	August 11, 2015	Vishal Bhatt & Procheta Mallik	MCA – IIT Delhi, PhD – Astronomy University of Glasgow, UK	Innovation and Science Promotion Foundation (ISPF) abouthands-on Science and Maths toys
10	October 15, 2015	Srikrishna Balachandran	Energy & Environmental Engineer, Mindtree Limited, Bengaluru	How Mindtree is using Technology to empower Waste pickers and building an SWM Ecosystem
11	December 10, 2015	Lawrence Surendra	Environmental and Development Economist, Science and Technology Policy Specialist, Education for Sustainable Development and HRD Expert, Mysuru (Karnataka)	Preparing for the implementation of the Sustainable Development Goals (SGDs) and Sustainable Development Agenda 2030 Road map – Integrating the Three Dimensions of Sustainable Development
12	December 23, 2015	Dr. B. Ramakrishna Goud	Additional Professor St. John's Medical College Bangalore, Karnataka	Methodology for Nutritional Assessment in Children
13	January 21, 2016	Dr. Fabio Masi	Technical Director, R&D Manager, IRIDRA Srl, Florence, Italy	Constructed Wetlands

4 SELF SUSTAINABLE PROJECTS

3. Support to other organisations

A total of 11 guest lecturers, from 6 national and 5 internal speakers were organised during the year. Besides providing new information to CDD Society in-house staff, it helped the management to collaborate with guest lecturers as advisors on management issues and team building ideas.

Sl. No	Particular
1	Centre for Advocacy and Research (CFAR) for Faecal Sludge Management and Decentralised Solid Waste Management on 18th & 19th December, 2015
2	National field exposure visit for Urban Local Body (ULB) officials at CDD Society/CASS, Bangalore on 7th October and 16th December 2015 for CSE at CASS,
3	"Training on Septage Management –Towards Citywide Sanitation" for Centre for Environment and Science, Delhi 7th – 9th December 2015. Session was conducted on 8th December 2015
4	One day training on "Water, Water Conservation Methods & Wastewater Management" for ULBs of Karnataka on 21st November 2015
5	Presented a DEWATS™ session at ECC Bangalore "Water: Harvesting, Maintenance and Recycling" on July 28th - 30th, 2015
6	Exposure visit for ADB officials of Bangladesh on Technology Options for Decentralised Wastewater Treatment Systems at CASS
7	Gramavidya & RGRHCL – Koushalya Shaale, Bangalore - on Alternative and Energy Efficient Building Technologies – 20th – 22nd August, 15th - 17th October 2015 and 21st – 23rd Jan 2016
8	Planning and Management of Drinking Water and Sanitation Projects – 20th July – 16th August 2015 by National Institute of Rural Development (NIRD)
9	"Planning and Management of Rural Housing and Habitat Projects" organised by National Institute of Rural Development (NIRD), Hyderabad from September 14th - October 11th , 2015 sponsored by Ministry of External Affairs. Visited CASS on October 5, 2015.

4 SELF SUSTAINABLE PROJECTS

4. School Sanitation Programme

Sl. No	Particular
1	Swachh Vidyalaya Programme at Oakridge International School at Sarjapur Hobli, Bangalore on November 16th, 2015. They visited CASS on 19th November, 2015.
2	Around 20 children and three teachers of BeMe Open School based in Bangalore visited CASS, CDD Society on August 7th, 2015.

5. Proposals submitted: 15 proposals submitted and five approved

Sl. No	Particular
1	Training on Decentralised Wastewater Treatment Systems and its application in the Urban context to Municipal Administration and Urban Development Department, Government Of Andhra Pradesh
2	Masons training on Toilet Construction (twin pit latrines, improved septic tank, biodigestor, and aerobic biotank) to Administrative Staff College of India (ASCI) Hyderabad
3	Training programme on DEWATS™, Faecal Sludge Management (FSM) and Solid Waste Management for Engineers of Urban Local Bodies (ULBs) submitted to Ministry of Works and Human settlement, Bhutan
4	Training programme on Community Based Waste Management for project team leaders submitted to Centre for Advocacy and Research (CFAR), New Delhi
5	Training programme on Citywide Sanitation Planning for implementing officers of ULBs submitted to City Managers Association Karnataka (CMAK)
6	Orientation cum exposure visit on DEWATS and Faecal Sludge Management to Directorate of Municipal Administration, Karnataka
7	Proposal to operate "Water and Wastewater Learning Theme Park" of Karnataka to Urban Water Supply and Drainage Board Bangalore, Karnataka
8	Annual Action Plan of Key Resource Centre submitted to Ministry of Drinking Water and Sanitation

4 SELF SUSTAINABLE PROJECTS

5. Proposals submitted: 15 proposals submitted and five approved

Sl. No	Particular
9	Proposal for training cum exposure visit on Faecal Sludge Management (FSM) to Practical Action, Odisha
10	Proposal to conduct training programme on Solid and Liquid Waste Management (SWLM) for engineers of Rural Engineering Services (RES) and coordinators of Swachh Bharat Mission in Chhattisgarh to UNICEF
11	Proposal to conduct training programme on Liquid and Solid Waste Management to Municipal Council, Raisen, Madhya Pradesh
12	Proposal for "Training programme for Plumbers" submitted to Bangalore Water Supply and Sewerage Board, Karnataka
13	FSM training for NIUA project with EAWAG and Centre for Affordable Water and Sanitation (CAWST)
14	Proposal on "School Sanitation" submitted to SCAN India
15	Proposal submitted to HSBC and Swades Foundation for training on "Skills for Life"

6. DEWATS Academia Orientation

Orientation workshop on Wastewater and Decentralised Wastewater Treatment Systems for 150 engineering students of Sri Krishna College of Technology, Coimbatore

4 SELF SUSTAINABLE PROJECTS

7. Outreach

Sl. No	Particular
1	Initiated talks with IIT, Chennai and other leading research institutes
2	Initiated talk with KKID, Coimbatore ,Tamil Nadu
3	Initiated talks with the Sustainability Platform (TSP) of the National Design and Research Foundation of the Institution of Engineers, India
4	Initiated talks with Arghyam for school sanitation
5	Initiated talks with Ministry of Human Resource Development for school sanitation programmes
6	Initiated talks with International Association of Plumbing and Mechanical Officials (IAPMO) for plumbers training programme

8. Highlights (positive & negative)*

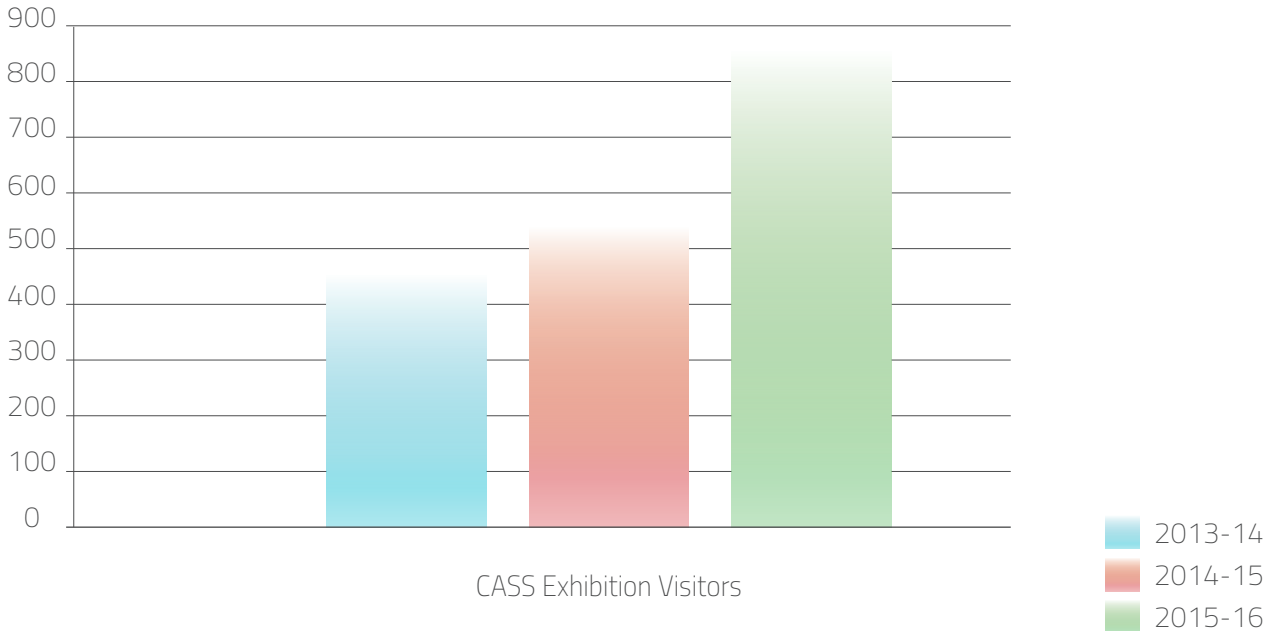
Sl. No	Particular
1	Organised National Summit on Sustainable Sanitation and Water Management – attended by 450 participants
2	IEmpanelment as Key Resource Centre (KRC) by Ministry of Drinking Water & Sanitation, Government of India.
3	First government collaborative training project undertaken with Andhra Pradesh, Government Municipal Administration & Urban Development Department
4	Spread our wings into a new region – Lebanon - through an NGO named Concern Worldwide.

4 SELF SUSTAINABLE PROJECTS

8. Highlights (positive & negative)*

5	Training modules/Teaching aids development a. KRC trainings b. BWSSB – Registered plumbers and contractors training programme on Dual Piping and Decentralised Wastewater Treatment Plant Implementation and Maintenance. c. Masons' Training Programme on Twin Pit toilet, Urine-Diverting Dry Toilet (UDDT), Septic Tank and DRDO Biodigesters and Aerobic Bio Tank d. Following Memorandums of Understanding were signed : ▪ World Toilet Organisation ▪ Sanction order for 3 water trainings by Ministry for Drinking Water and Sanitation ▪ CAWST-EAWAG-CDD workshop

To assess results of training programmes, an online feedback system was introduced. This has helped in conducting an on-the-spot analysis of the delivered training, which is immediately presented to participants and the data is also shared with participants via a feedback poster, which is prepared soon after the training, for circulation within CDD Society.



CASS Exhibition Visitors

4 SELF SUSTAINABLE PROJECTS

|4.2|
DBNS
Technical Unit

Overview

The key responsibilities of the technical team include implementing existing DEWATS projects, acquiring new projects through more focused marketing and sales efforts, and building capacity for design of Faecal Sludge Treatment Plants. With respect to addressing inquiries, the focus was on providing professional service delivery, keeping client satisfaction in mind. To start with, the team has been able to provide timely responses to queries by keeping standardized responses and information ready – these are sent out as the query comes in.

Outside of regular DEWATS work, the technical team was heavily involved in the construction of CDD Society's first city-scale Faecal Sludge Treatment Plant at Devanahalli, Bangalore, this year. The technical team was involved on ground during the entire period of construction. After many challenges, the plant was finally operational in five months.

This year was also a year for stepping into community scale treatment systems. While there weren't many new private SME scale projects undertaken this year, three projects for which CDD Society designed a treatment system for a public scale were undertaken. A notable achievement from these projects was designing of a 420m3 DEWATS for Samste Town in Bhutan. We also saw the design and construction of two other public DEWATS in Gorkhakhpur and Bashirath towns of Uttar Pradesh. There the wastewater from households and other establishments is treated by DEWATS before being discharged into the river. A detailed technical feasibility study was conducted in Eruvadi Village, Tamil Nadu for a DEWATS at the outlet of a stormwater drain that discharges water into the river. The main intention behind this project was river rejuvenation, where unlike most other places, the villagers were also interested in to the extent that they termed treated wastewater as "Gold Water". Due to a lack of funds with the village panchayat, the decision to build a DEWATS is still pending.

Overall, this year saw the completion of seven new and old DEWATS projects and an additional five are still under-construction. A total of 78 proposals were sent.

IMPACT OVERVIEW

With over 30,000 beneficiaries in India and about 18,000 beneficiaries outside India, the environmental and social impact is definitely increasing; especially with projects where the treatment systems are built for common public to treat their waste and discharge only treated components into the environment. Apart from an environmental benefits, there is a huge social impact of providing good sanitation facilities to people and creating awareness about the importance of sanitation and treatment of waste to individuals.

4 SELF SUSTAINABLE PROJECTS

Case Study

The Royal Ministry of Bhutan, based on recommendations of the Wastewater Management Plan prepared by CDD Society in 2014, wanted to implement a pilot DEWATS, FSTP and Sanitary Landfill in Samste District. The Ministry approached CDD Society for the same in mid-2015. Once the contract was signed, a team from CDD Society visited Samste District. After the feasibility study, it was decided that DEWATS would be suitable for the main market area of Samste Town. It will cater to over 3,500 beneficiaries from the shops, offices and households in and around the market area. Along with a DEWATS, the technical team also designed a 6 cu.m per week FSTP for Samste Town. The plant would cater to 7,800 beneficiaries of the town. A Planted Drying Bed system was designed for the same.

CHALLENGES & LEARNINGS

One of the biggest challenges faced was the conversion of inquiries into projects. Though consistent follow up helps, it is not the only strategy that works. A motivated client is very important but a dedicated business development person and marketing team is extremely crucial to ensure that time taken to pursue any inquiry is rewarded by conversion of a project. In an effort to increase sales/inquiries, the team conducted three exhibitions this year. Designing and setting up a stall at these exhibitions was challenging due to a lack of experience of doing similar work. Post that, however, the bigger challenge was following up with the large database of people who visited the stall to ensure conversion of at least a few interested parties. Conducting exhibitions may be a very good way to disseminate information about DEWATS and our other work, but whether it is a way of generating local DEWATS projects is questionable.

Working across the border with another country (Bhutan) was another challenge. The team got a chance to visit the place only once and was supposed to prepare three DPRs (DEWATS, FSTP and Sanitary Landfill) based on the data collected. One of the DPRs was for the design of a sanitary landfill, which is not our core expertise. However, it was taken up on the strong insistence of the client. That DPR was accomplished with the help of an external consultant. As the FSTP receives highly inconsistent quantity of sludge, the Devanahalli model design could not be suggested. Hence, a planted drying bed was designed.

4 SELF SUSTAINABLE PROJECTS

|4.3| Research and Development Unit

One of CDD Society's prime services is the design and implementation of Decentralised Wastewater Treatment Systems (DEWATS™) in urban and peri-urban areas. Therefore, the Research and Development (R&D) unit continuously works on-site to attain samples for laboratory analysis and to understand the bio-technical requirements to improve the sanitation infrastructure.

Engineers at CDD Society, while implementing DEWATS™ in diverse sectors, face numerous challenges of designing for varying influent characteristics, peak flow hours, etc,. A need has been felt for obtaining data on DEWATS™ treatment efficiency in every implemented sector over a period of time so as to crosscheck the design parameters, and make modifications if any, in future implementations. With respect to environmental protection, effluent discharge standards have been provided by The Pollution Control Board (PCB). These standards are defined to check the quality of effluents discharged into fresh water bodies and control the disposal of untreated sewage into water bodies. The DEWATS™ effluents should be in compliance with the prescribed standards.

Case Study

The sanitation problem in India has intensified over the last two years due to the increasing gap between the rate of toilet construction (ever increasing to reach targets of eradicating open defecation) and implementation of systems for collection and treatment of faecal sludge from newly constructed toilets and on-site storage units. This translates into increased health risk (through exposure pathways for water borne diseases, faeces to mouth contamination, worm infections) as the lack of scientific collection and treatment of faecal sludge leads to increased pollution of land and water bodies.

A FSTP has been built at the CASS campus as a pilot intervention solution towards indiscriminate faecal sludge disposal practices in India. A continuous monitoring of the system is being carried out and results show that a combination of anaerobic and aerobic treatment modules are most promising when it comes to stabilizing the solids present in faecal sludge. The treatment by-products are assessed for nutrient values and pathogen content for safe reuse.

IMPACT OVERVIEW

Environmental Impact

Systematic monitoring was conducted for 23 DEWATS projects located in Delhi, Karnataka and Tamil Nadu to assess the environmental impact of these projects. More than 75% of DEWATS projects are working and meeting clients' requirements.

Detailed wastewater monitoring was conducted at 5 DEWATS projects to ensure the safe discharge/ reuse of treated water without any negative impact to the environment.

Detailed monitoring of the pilot Faecal Sludge project at CASS is being conducted to understand the FS and its treatment requirements. The results are being incorporated into the design for the Town level FS treatment unit for Devanahalli Town.

In order to meet the recent effluent standards prescribed by The Ministry of Environment and Forest, DEWATS needs a robust, compact and cost effective tertiary module. With this in mind, a vortex system which meets all the requirements, is being installed at Beedi Workers Colony and its suitability is being assessed for existing DEWATS.

4 SELF SUSTAINABLE PROJECTS

MonEV OF DEWATS

Name of Project	State	Type of Project	Client
Kengeri individual house	Karnataka	DEWATS-SME	Mr. Narasinga Rao
Nurture School	Karnataka	DEWATS-SME	Ratngiri Impex
SVYM-1	Karnataka	DEWATS-SME	SVYM
SVYM-2	Karnataka	DEWATS-SME	SVYM
Valley School	Karnataka	DEWATS-SME	Valley school
Prayag Discovery Village	Karnataka	DEWATS-SME	PDV
Positive label-1	Karnataka	DEWATS-SME	Positive packaging
Positive label-2	Karnataka	DEWATS-SME	Positive packaging
Good Earth Malhar Residency	Karnataka	DEWATS-SME	Good Earth Groups
Danish Steel Factory	Karnataka	DEWATS-SME	Danish Steel Fcatory
IDPEL	Tamil Nadu	DEWATS-SME	IDEPL
Lonara	Maharasthra	DEWATS-SME	IIYW
Mahajan Nagar	Maharasthra	DEWATS-CBS	CDD RCO, NIT
Kalmeshwar Weekly Market	Maharasthra	DEWATS-CBS	Kalmeshwar Municipal Council
Katol Public Toilet	Maharasthra	DEWATS-CBS	Katol Municipal Council
Slaughter House, Umred	Maharasthra	DEWATS-SME	Umred Municipal Council
Jamia Instituite Hostel	Delhi	DEWATS-SME	Jamia Intitutes
Goyala School	Delhi	DEWATS-SME	Goyala Groups
Goyala School-2	Delhi	DEWATS-SME	Goyala Groups
Goyala School-3 (Hostel)	Delhi	DEWATS-SME	Goyala Groups
Shyam Rice Mill	Delhi	DEWATS-SME	SRM Groups
CSE Office	Delhi	DEWATS-SME	CSE
Police Quaters, Bharai	Himachal Pradesh	DEWATS-SME	Police Training Center

4 SELF SUSTAINABLE PROJECTS

|4.4|

The Citywide Sanitation Planning

CDD Society adopts an integrated, inclusive and holistic planning approach to prepare sanitation plans for metros, medium and small towns. And since recently, the aim has also included diversifying into rural areas.

The focus is on integrating decentralised sanitation approaches with centralised conventional systems, thus ensuring 100% sanitation access for the urban population. With increasing urbanisation, centralised systems are often unable to cope with the ever increasing demand to manage sanitation infrastructure. As a result, many settlements remain unserved. Decentralised sanitation infrastructure and services have proven to be an effective solution for addressing the problem by complementing existing centralised systems.

The CSP unit, along with CDD Society's network partners, has prepared and evaluated sanitation plans for cities/ towns across seven states with populations ranging from 20,000 to 1.2 million. The team is backed by over 10 years of expertise in providing sanitation plans for cities as well as rural areas across South Asia. The unit brings together the expertise of a range of disciplines from urban planning, geography, and engineering apart from an understanding of institutional and legislative frameworks to prepare sanitation plans in alignment with stakeholder consultations of the respective city, town or rural area. The sanitation plans provide a framework for implementing solutions along all segments of the sanitation value chain along with a guide on potential investments and their process of implementation.

The unit works with clientele like state and local governments, aid agencies like the Asian Development Bank, World Bank, GIZ etc. as well as other major not-for-profits like The Bill and Melinda Gates Foundation (BMGF), Araghyam, Indian Institute of Human Settlements (IIHS) amongst others. This apart, the unit also partners with network partners of CDD Society across South Asia. The network partner comprise of government agencies, not for profit organisations, academic institutions as well as private service providers.

Towards the end of 2015, the CSP unit had overseen the completion of an interesting portfolio of diverse projects ranging from general services of CSP provision to a detailed preparation of a wastewater management plan. The team has also worked on comparing the carbon footprint of various wastewater treatment solutions thereby evaluating the impact of sanitation on climate change.

4 SELF SUSTAINABLE PROJECTS

|4.4|

Prefabrication

4.4.1 Nepal

The devastation caused by the Nepal earthquake was attended to by multiple development agencies from across the globe. ENPHO, CDD Society's partner organization in Nepal, was able to raise funds through OXFAM and build around 100 relief camps in the Mahalakshmi municipality, located in the Kathmandu Valley, around 15km away from the capital's city center. These camp sites offered homeless people an immediate though temporary solution. Effective solutions for environmental and health issues were not addressed immediately however, it was high on the agenda.

At the camps, shared toilets were built and provided with pits - a provisional construction, which could not collect and store the human waste being generated for long. If allowed to fill up and overflow, it would lead to contamination of groundwater and nearby areas. This would result in faecal contamination of drinking water as well as mosquito breeding.

Keeping the effect on the environment and public health in mind due to fresh undigested faecal sludge entering the eco system, ENPHO reached out to BORDA for financial and technical support. BORDA was able to raise funds through donations which could support the implementation of a faecal sludge treatment plant to treat the sludge obtained from the relief camp site toilets. CDD Society assessed the site situation and recommended the need of an appropriate collection system as well as treatment plant comprising of a combination of treatment modules that would allow for solid liquid separation, digestion and stabilization and pathogen removal - feeding tank, two bio-gas digesters, stabilization tank, integrated anaerobic baffle reactor and anaerobic filter, planted sludge drying bed, planted gravel filter and collection tank.

Discussions were held with local community leaders by ENPHO and a site was selected where the treatment plant could be located. 400m2 of land belonging to Saligram Balgriha was donated for public good. The treatment by-products, treated wastewater, compost and biogas will be used by the adjacent school of Saligram Balgriha for its farming activities. The team on site was able to implement the treatment plant in a record time of less than 40 days. The faecal sludge treatment plant, with a capacity of treating nearly one pit (1.2m3) daily, was inaugurated on 31st March 2016 in the presence of Mr. Rishi Ram Sharma, Chief District Officer, Lalitpur.

4 SELF SUSTAINABLE PROJECTS

|4.4|

Prefabrication

4.4.2 Sanitation Action Plan and Technology Demonstration(s) for 30 Pourashavas in Bangladesh

The Asian Development Bank (ADB) through its program "Third Urban Governance and Infrastructure Improvement Project" (UGIIP-III) is supporting the Government of Bangladesh to strengthen urban governance and improve urban infrastructure and service delivery in 30 Pourashavas (Urban Local Bodies) to develop them into model towns of the country. One approach in this process is to develop a sanitation action plan and demonstrate sustainable technology options for sanitation service delivery in the 30 Pourashavas which can be further replicated or 'program managed' in other urban areas in Bangladesh.

ADB floated global tenders for the selection of a consulting firm for the project's execution. BORDA with its consortium partners CDD Society, Infrastructure Development Corporation (iDeCK) and Dushtha Shasthya Kendra (DSK successfully acquired the project by outbidding other internationally renowned organizations in the sanitation sector.

The BORDA-CDD-DSK-iDeCK consortium brought together a comprehensive combination of domain expertise, geographical coverage and contextual experience in decentralized sanitation infrastructure, community based interventions, advocacy and capacity building. The consortium's expertise in designing and implementing decentralized sanitation infrastructure, especially for low-income communities and citywide sanitation planning to on-ground implementation were instrumental in being selected for the assignment. The four organizations together covered the entire value chain of sanitation as well as all components of a good sanitation program – planning, technology, financing and community mobilization.

The sanitation action plan aims at identifying solutions addressing all components across the sanitation value chain that are technically, financially and institutionally viable. In the context of the project, the sanitation value chain refers to access to toilets (user interface) followed by collection, conveyance, treatment, disposal and reuse of faecal sludge/septage and wastewater, while addressing solid waste management and storm water management as cross cutting sectors.

The scope of work for preparation of sanitation action plan included review and analysis of existing sanitation situations across the sanitation value chain and cross-cutting themes mainly focusing on faecal sludge management, review of existing institutional and governance framework for sanitation service delivery, assessing the demand and supply for sanitation infrastructure and services, strategies (short, mid and long term) aiming at reducing the demand-supply gap and preparing an action plan and investment plan for each Pourashava.

4 SELF SUSTAINABLE PROJECTS

|4.5| Community-Based Sanitation

Overview

Community-Based Sanitation (CBS) focuses on providing wastewater treatment systems, in combination with community or individual toilets, to disadvantaged communities across India. In the case where a town or municipality has partial sewerage coverage, DEWATSTM is implemented in the target community, whereas if the town/municipality has no coverage, FSM is opted for on a larger scale and toilet promotion happens at the community level. CDD Society's CBS projects usually entail partnering with another NGO that implements the toilet component. Such projects were taken up initially but gradually, the focus shifted away from the community. Now, it would like to reincorporate CBS projects into its portfolio.

As of the end of the 2016-2017 financial year, CDD Society is implementing one CBS project and has two others in the pipeline. The active project is in Devanahalli and is focused on toilet promotion, with the ultimate goal of ensuring all faecal matter in the town can be treated in the FSTP. In March 2016, CDD signed a contract with an NGO called Support for Network and Extension Help Agency (SNEHA) to promote proper toilet construction and usage under the Swachh Bharat Mission (SBM) in four communities in Devanahalli. These four communities were selected based on the prevalence of open defecation, lack of access to sanitation facilities, adequate access to water, and interest of households in participating in the project. By the end of March, the initial household survey was completed, revealing that 130 households in these communities lacked toilets (nearly one-fourth of the entire population lacking toilets in Devanahalli), and 80 of these households had been approved for SBM funding for toilet construction (but few had actually received any funds). In the next quarter, SNEHA will conduct IEC activities such as video shows and mason trainings to motivate community members to build toilets.

4 SELF SUSTAINABLE PROJECTS

|4.6| Support Units

4.6.1 Knowledge Management

The Knowledge Management Unit (KMU) at CDD Society strives to maximise the value and application of the organisation's knowledge by building, developing, managing and retaining know-how to achieve short and long term goals.

The unit provides a vast spectrum of raw data managed over the DBNS platform, an internal database created for collecting and tracking of enquiries, trainings and external feedbacks. The unit worked towards connecting people and building a network through social media, participation in sector specific forums, and has allocated more time for reflection and analysis of project specific activities. Accordingly, the unit provides not just information, but insight, guidance, experience and know-how, for the purpose of decision-making and effective action.

CDD Society's social media pages gained popularity over the last 12 months. The number of Facebook likes increased to 743 Twitter followers to 150. The unit is working to find ways to improve its presence and use these platforms more effectively.

4.6.2 Finance and Administration Unit (F&A Unit)

CDD Society's F&A Unit was strengthened by the appointment a full time internal auditor, who works in parallel with the Accounts team. The Administration Department has been supporting all the other units and programmes in logistic arrangements, recruitments and other secretarial duties.

5 HIGHLIGHTS

|5.1|
bangaloREsidency @CDD Society / BORDA

The bangaloREsidency programme has been conceived as a long-term collaboration between the Goethe-Institute / Max Mueller Bhavan Bangalore and other innovative and discerning contemporary art/cultural spaces and partners in Bangalore, with a view to offer German aspirants a space for creative output and the opportunity to interact with Indian artists/experts. The bangaloREsidency programme is designed to involve mutual exchange so that both visiting Germans and the local community reap the benefit of fresh perspectives and expanding horizons.

Under this context, CDD Society and BORDA jointly partnered with Max Mueller Bhavan to select an interested photographer from Germany, who would not only produce documentation pictures for the organisation but also develop her own art work, in this case portraits of individuals who work across the sanitation sector. Ms. Julia Knop, CDD Society and BORDA's art resident, is an independent photographer who has portrayed the rapid growth of Bangalore through the lens of the growing IT sector, as she captured different aspects of the Indian economy and society.

Merging art and sanitation may not be so common, but the bangaloREsidency programme gave CDD Society and BORDA an opportunity to showcase the possibilities of collaboration to members of the art as well as sanitation sector. The photos produced by Ms. Julia Knop, are exhibited in the office premises and allow visitors of CDD Society to attain a visual introduction to the organisation's work.

|5.2|
National Summit

The National Summit on Sustainable Water & Sanitation (NSSWS) was attended by 450+ delegates from across India and several international speakers on 7th-8th January 2016 in Bangalore. The idea was initiated and formalized with the signing of a Memorandum of Understanding with Nispana Innovative Platform Pvt. Ltd. Over the next three years, both organizations will work together to create and expand the summit to a national brand.

The aim of the NSSWS was to bring together government departments and stakeholders on one platform. Access to water and sanitation is a national need. Therefore the onus to find solutions to the problems has to lie with private and public organisations. NSSWS' focus was to create awareness about the existing water and issues in India, the governments' future plan for Swachh Bharat Abhiyan, and national reforms on water and sanitation. Besides government undertakings, this summit also showcased sustainable solutions for the water and sanitation sector through PPP models, by inviting the private sector to participate and introduce regulatory reforms


TREATING WASTEWATER NATURALLY
Shit Flow Diagrams
Understanding India's Sanitation Crisis
IT Parks / Commercial Buildings
DEWATS
Urban Housing Societies
Settler
Anaerobic Baffle Reactor
Planted Gravel Filter
Consortium for DEWATS Dissemination Society


Supported by
Researched &
Sustainable Water & Sanitation
Silver Partners
Knowledge Partners
Association Partners
Lunch Partner
WaterAid

6 GOVERNING BODY

Sl. No	Name	Organisation Name	Location	Designation
1	Mr. Israel Gnanaraj	Design Collaborative	Puducherry	President
2	Mr. Anselm Rosario	Waste Wise Trust	Bangalore	Vice President
3	Mr. Koshy Mathew	Rural Literacy and Health Programme (RLHP)	Mysore	Treasurer
4	Mr. Anuj Malhotra	Reflow	Ahmedabad	In-charge Secretary
5	Mr. J.S. D' Souza	Individual	Gurgaon	Member, Governing Body
6	Ms. Latha Raman Jaigopal	Inspiration	Kochi	Member, Governing Body
7	Mr. A. Gurunathan	DHAN Vayalagam (Tank) Foundation	Madurai	Member, Governing Body
8	Mr. Tapan Patel	Centre for Integrated Development (CfID)	Ahmedabad	Member, Governing Body
9	Ms. Shilpa Mirashi	IIYW	Nagpur	Member, Governing Body

STAFF LIST

Sl. No	Name of Employee	Period, if applicable
1	Rajesh Pai H.	(Until 31/7/2015)
2	Susmita Sinha	(Until 31/7/2015)
3	Shamala S.	
4	Laxman Gowda	
5	Rahul Sachdeva	
6	Thimmesha R.	
7	Anwaar Ashraf	
8	Antony Charles Monk	
9	Sachit Bhandarkar	
10	Pravinkumar Choudhari	
11	Shailendra Brahmey	
12	Rohini Pradeep	
13	Andrews Jacob	
14	Swarna Lakshmi N	
15	Nithyananda J. S.	(Until 31/7/2015)
16	Shekhar Digambar Divale	
17	Molly Dmello	
18	Roopa Bernardiner	
19	Madhwaraj Shrinivas Belgaumkar	
20	Prashantha Y K	
21	Dene Godinho	
22	Eva Mary	(Until 31/7/2015)
23	Venkatachala Reddy K V	
24	Khwairakpam Raina Devi	

STAFF LIST

Sl. No	Name of Employee	Period, if applicable
25	Santosh R	
26	G S Santhosh	
27	Ravikumar A G	
28	Sachin Tajne	
29	Manjunath K	
30	Anusha N	
31	Nithya B P	
32	Pavan Kumar	(Until 29/01/2016)
33	Regi K J	
34	Susheel Sagar B S	
35	Philip Castelino	
36	Sravani Singamshetty	
37	Rajashekara K S	
38	Nandeesha D	
39	Kumar N	
40	Keerthi R	(Until 11/06/2015)
41	Rajesh D S	
42	Ravikumar	
43	Shrinivas	
44	Jayalakshmi S	
45	Susheelamma K	
46	Ravindra Chambhare	
47	Avinash Yadav Kumar	
48	Chethan B	(Until 29/05/2015)

STAFF LIST

Sl. No	Name of Employee	Period, if applicable
49	Manikandan K M	(Until 5/5/2015)
50	R Karthik	
51	Masoom Mallick	
52	Harish Kumar B.K.	(Until 31/7/2015)
53	Tanvi Sahni	
54	Reema Padia Parikh	
55	Santhosh Tapovan	
56	Sankeerth Chinni	(Joined On 4/5/2015 - Until 7/7/2015)
57	Praveen Nagaraja	(Joined On 4/5/2015)
58	Lincy Paravanethu	(Joined On 4/5/2015)
59	Emon Dastidar	(Joined On 11/5/2015)
60	Subodh Kumar Sasmal	(Joined On 1/6/2015)
61	Nithin A.	(Joined On 15/6/2015)
62	Uchila Divyahree Shridhar	(Joined On 15/6/2015)
63	Deepthi B.K.	(Joined On 15/6/2015 - Until 9/7/2015)
64	Sreevidhya Satish	(Joined On 15/6/2015)
65	Amresh Sinha	(Joined On 1/7/2015)
66	Indireddy Pavan Kumar Reddy	(Joined On 1/7/2015)
67	Ananya Ghosh	(Joined On 2/7/2015)
68	Abhinav Tiwari	(Joined On 2/7/2015 - Until 27/11/2015)
69	Sourav Parmar	(Joined On 6/7/2015 - Until 14/8/2015)
70	Anik Dutta	(Joined On 15/7/2015)
71	R. Deebancharkaravarthy	(Joined On 15/7/2015 - Until 3/03/2016)
72	S Sarani S.	(Joined On 19/8/2015)

STAFF LIST

Sl. No	Name of Employee	Period, if applicable
73	Sasanka Velidandla	(Joined On 1/9/2015)
74	Varshini J. Reddy	(Joined On 16/11/2015)
75	Darshan B.N.	(Joined On 24/11/2015)
76	Ajith Edathoot	(Joined On 2/12/2015)
77	Swadha Das Mohapatra	(Joined On 11/01/2016)
78	Ritesh Kumar Suman	(Joined On 18/01/2016)
79	Kanakeshwar Kanakraj Devangan	(Joined On 17/02/2016)
80	Prabhu A.N.	(Joined On 21/3/2016)

CONSORTIUM FOR DEWATS DISSEMINATION(CDD) SOCIETY

BALANCE SHEET AS AT MARCH 31, 2017

Amount in Rs.

Particulars	Schedule	As at March 31, 2017		As at March 31, 2016	
SOURCES OF FUNDS					
Capital Fund	A		52,000		52,000
Capital Reserve	A		1,958,156		1,958,156
General Fund	A		17,873,404		22,594,757
Donors Funds	B		483,936		4,403,170
			20,367,496		29,008,083
APPLICATION OF FUNDS					
Fixed Assets	C				
Gross Block		18,375,677		15,109,258	
Less: Depreciation		11,417,758		9,368,923	
Net Block			6,957,919		5,740,336
Investments			10,000		10,000
Current Assets, Loans & Advances:					
Cash & Bank Balances	E	2,201,983		7,417,881	
Loans, Advances & Deposits	F	12,526,864		16,207,989	
Inventory	D	4,852,967		5,129,422	
		19,581,814		28,755,292	
Less: Current Liabilities					
Statutory Recoveries	G	1,551,933		739,323	
Other Liabilities	H	3,853,906		4,302,450	
Programme Advances	I	776,397		455,772	
		6,182,237		5,497,545	
Net Current Assets			13,399,577		23,257,747
TOTAL			20,367,496		29,008,083
Notes to Accounts	U				

The Schedule referred to above forms an integral part of the Balance Sheet;

For Consortium for DEWATS Dissemination (CDD) Society

CONSORTIUM FOR DEWATS DISSEMINATION ★ BANGALURU

Koshy Mathew
Treasurer

Anuj Malhotra
Secretary

As per our report of even date attached
For M.A. BRAGANZA & ASSOCIATES
Chartered Accountants
Firm Registration No 000507S

M.A. BRAGANZA & ASSOCIATES ★ BANGALORE 560 025 ★ CHARTERED ACCOUNTANTS

Ravishankar Hegde
Partner
ICAI Membership No. 232520

Place: Bangalore
Dated: July 19, 2017

CONSORTIUM FOR DEWATS DISSEMINATION(CDD) SOCIETY

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED MARCH 31, 2017

Amount in Rs.

Particulars	Schedule	Year ended March 31, 2017	Year ended March 31, 2016
INCOME			
Annual Subscription fees		60,000	53,000
Income earned during the year	J	19,689,882	19,999,726
Savings Bank Interest		177,601	175,091
Fixed Deposit interest		21,310	-
Restricted Funds:			
Grants - BMZ BNS		12,285,402	16,932,709
Grants - FC		-	568,422
Grants - NEXUS		12,835,703	13,367,118
Grants - BMGF I		-	13,061,612
Grants - BMGF		33,080,000	-
Grants - BMGF II		11,558,632	-
Grants - EU Shimla		1,157,190	3,500,000
Grants - IIHS		11,000,000	7,000,000
Grants - KRC		-	714,900
Bank Interest		834,605	328,135
TOTAL (A)		102,700,326	75,700,713
EXPENDITURE			
Sanitation - DEWATS unit and Other Expenses	K	26,854,771	21,748,377
Project Expenses - Foreign Contribution	L	81,799,260	52,486,713
Depreciation on Fixed Assets	C	2,048,836	2,099,667
Receivables written off		638,046	-
TOTAL (B)		111,340,913	76,334,757
Surplus/(Deficit) (A-B)		(8,640,587)	(634,044)
Surplus/(Deficit) transferred to -			
Donors' Funds		(3,895,826)	(3,424,719)
General Fund		(4,744,761)	2,790,675
		(8,640,587)	(634,044)
Notes to Accounts	U		

The Schedule referred to above form an integral part of the Income & Expenditure Account;
Note: All expenses and income are on accrual basis of accounting;

For Consortium for DEWATS Dissemination (CDD) Society

Koshy Mathew
Treasurer

Anuj Malhotra
Secretary

As per our report of even date attached
For M.A. BRAGANZA & ASSOCIATES
Chartered Accountants
Firm Registration No 000507S

Ravishankar Hegde
Partner
ICAI Membership No. 232520

Place: Bangalore
Dated: July 19, 2017

CONSORTIUM FOR DEWATS DISSEMINATION(CDD) SOCIETY
RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED MARCH 31, 2017

Amount in Rs.

Particulars	Sch	Year ended March 31, 2017	Year ended March 31, 2016
Opening Balance			
Cash		52,287	93,781
At Bank		7,365,594	16,085,101
		7,417,881	16,178,882
Receipts			
Advances Recovered	M	485,902	713,441
Statutory Recoveries	N	814,786	267,014
Grant Received		81,916,928	55,144,761
Bank Interest		1,033,516	503,226
Sundry Creditors - yet to be settled		(289,825)	639,062
Income earned during the year	O	19,984,964	19,661,025
Programme Advance Received	P	320,625	268,083
Tax Deducted At Source		(1,180,345)	(169,715)
Capital Work in Progress		-	-
TOTAL: (A)		103,086,552	77,026,898
Payments			
Project Expenses	Q	81,799,260	51,655,061
Sanitation - DEWATS unit and Other Expenses	R	26,873,399	21,705,634
Exposure Visit Advance Spent		1,635,786	-
Fixed assets purchased	C	3,266,419	2,414,756
Advances Paid	S	(4,397,633)	11,157,797
Other Liabilities settled	T	(1,512,829)	(1,145,349)
Receivables written off		638,046	-
		108,302,450	85,787,899
Closing Balance			
Cash		229,592	52,287
At Bank		1,972,391	7,365,594
TOTAL: (B)		2,201,983	7,417,881

The Schedules referred to above form an integral part of the Receipts & Payments Accounts;

For Consortium for DEWATS Dissemination (CDD) Society

CONSORTIUM FOR DEWATS DISSEMINATION ★ BENGALURU

Koshy Mathew
Treasurer

Anuj Malhotra
Secretary

Auditors' Report

We have examined the above account with the books of account and vouchers maintained by Consortium for Dewats Dissemination (CDD) Society and have found the same to be in accordance therewith and the information and explanations furnished to us and gives a true and fair view of the transactions of the CDD Society for the year ended March 31, 2017.

As per our report of even date attached
For M.A. BRAGANZA & ASSOCIATES
Chartered Accountants
Firm Registration No 000507S

Ravishankar Hegde
Partner
ICAI Membership No. 232520

M.A. BRAGANZA & ASSOCIATES ★ BANGALORE 560 025 ★ CHARTERED ACCOUNTANTS

Place: Bangalore
Dated: July 19, 2017

CDD Society: Survey No.205 ,Opp. Beedi Workers Colony, Kommaghatta Road, Bandemath, Kengeri Satellite Town, Bengaluru, Karnataka 560060