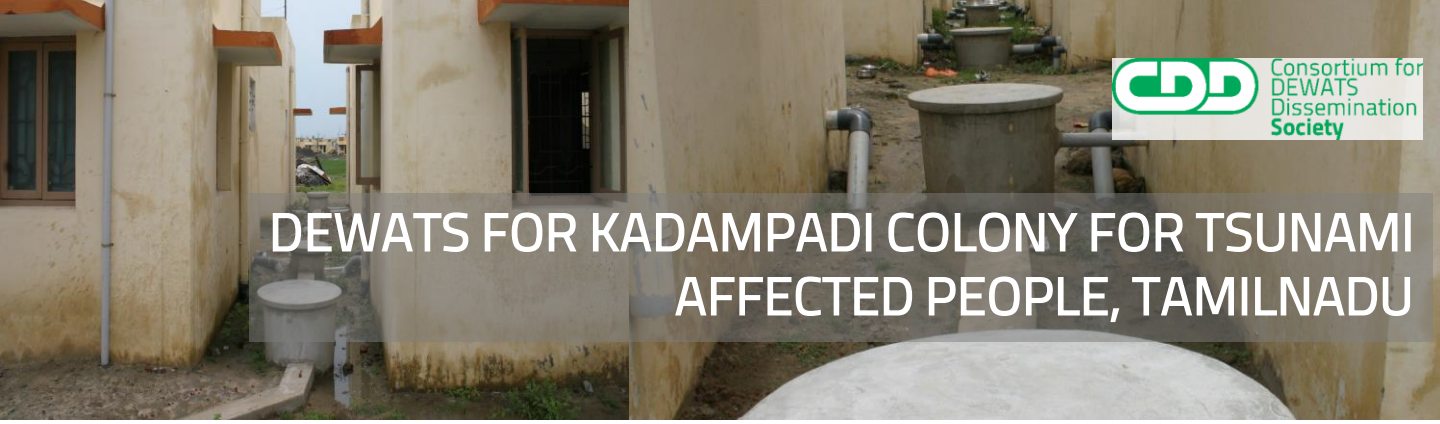

DEWATS FOR KADAMPADI COLONY FOR TSUNAMI AFFECTED PEOPLE, TAMILNADU

PROJECT BRIEF

Kadampadi is a rehabilitation colony for Tsunami affected people of Nambiyar Nagar and Ariyanattu Street. The new houses are located in Nagapattinam town limits, off Nagattinam- Karaikal highway. 225 houses have been constructed by Thanjavur Multipurpose Social Service Society (TMSSS) in this village, with funding from the Catholic Relief Service (CRS).

PURPOSE

- Safe disposal of wastewater
- To improve deteriorating environmental and hygienic conditions due to the absence of wastewater treatment or appropriate disposal

SYSTEM IN BRIEF

The DEWATS is pre-casted in Ferro cement by CSR and is laid underground at the specified level given by CDD. One DEWATS unit is provided for each block with 8, 10 or 16 houses put together, and the entire colony is divided into 22 blocks with a total of 22 DEWATS. The wastewater streams from each block are channeled from all the sources and collected in a common register near the treatment system, which consists of an Integrated Settler and Anaerobic Baffle Reactor. The water from these 22 blocks is then collected in a common Collection Tank and is then pumped out into an open drain.

1. **The Settler:** a sedimentation tank for retaining particles by settling over a specific time frame.
2. **Anaerobic Baffle Reactor:** ensures anaerobic degradation of suspended and dissolved solids by mixing fresh wastewater with an active sludge blanket.
3. **The Anaerobic Filter:** ensures anaerobic degradation of suspended and dissolved solids by using a filter media.
4. **A single Collection Tank:** to collect treated wastewater for discharge or reuse options.

SALIENT FEATURES

Source: Toilet, Bathrooms, Laundry and Urinals
Design capacity : 85 m^3/d
No of users : 1,225 (225 houses)
Peak flow : 8 Hours
Treatment Efficiency: 85%

PROJECT SPECIFICATIONS:

Kind of Project: CBS- DEWATS for community Wastewater
Funding Agency: CSR
Implementing Agency: CSR
Supporting Organization: CDD Society
Construction Period: 6 months
Construction Cost: Rs. 58 lakhs
Start of Operation: 2006

MODULES ADOPTED

Settler :
Area of Construction: 8.63 m^2
Total Volume: 2.6 m^3
Chambers: 2

Integrated ABR with AF
ABR: 5 chambers
AF: 2 Chambers
Total Length: 4.66m
Total Width: 1.85m
Volume: 22m^3
Area of construction: 13m^2
Built up area: 350m^3

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PROCESS FLOW DIAGRAM

Settler

Anaerobic Baffle Reactor (ABR)

Anaerobic Filter (AF)

OPERATION AND MAINTENANCE

The wastewater treatment plant is operated and maintained by a trained community member of Kadampadi.

A regular schedule is followed for maintenance, which includes periodical check of sewer line systems, removal of sludge in the settler and in the baffled reactor.

Cost incurred for O&M is approximately Rs. 8,000 p.a.

REUSE OPTIONS

- The water from the Collection Tank is let into a open drain.

LEARNINGS:

- Experience in DEWATS design and implementation in areas with high groundwater levels.
- Disposal of wastewater needed careful planning as water had to pumped for discharging into *nallah*.

PERFORMANCE OF DEWATS

Sample points	COD mg/l	BOD mg/l	TSS mg/l
Date of sampling: 03-03-2014			
At Inlet	1,320	1,079	2,956
At Outlet	80	58	994

PHOTOS