



DEWATS™ for Madapura Village

Coorg, Karnataka

PROJECT BRIEF

Rajiv Gandhi Housing Corporation Limited (RGHCL) and Karnataka State Habitat Center (KSHC) are constructing a housing colony near Madapura village for those who lost their houses during the Kodagu floods of 2019. The colony will be constructed in 2 phases – 400 houses will be setup in the first phase and 228 houses will be setup in the second phase.

For first phase (i.e. 400 houses), KSHC approached CDD Society to design a DEWATS™ upto secondary level of wastewater treatment; tertiary treatment will be implemented along with the treatment system for houses constructed in the second phase

PROJECT OUTCOMES

- Efficient management of wastewater generated in the housing colony, leading to an improved sanitation situation in and around the colony.

SYSTEM IN BRIEF

The DEWATS™ consists of the following modules:

Settler: a sedimentation tank for retaining particles by settling over a specific time frame.

Anaerobic Baffle Reactor: ensures anaerobic degradation of suspended and dissolved solids by mixing fresh wastewater with an active sludge blanket.

Anaerobic Filter: ensures removal of suspended solids by fixed bacterial grown on the surface of filter media.

The treated wastewater will be transferred to tertiary treatment unit after the construction of 2nd phase project.

SALIENT FEATURES

Source: Toilets, bathrooms, laundry and wash area

Design capacity: 130 KLD

No. of beneficiaries: 2,000

Peak hours: 12 hours

Influent quality: COD: 600 mg/l
BOD: 300 mg/l

Effluent quality: COD: 200 mg/l
BOD 75 mg/l

Efficiency: 75%

PROJECT SPECIFICATIONS

Funding Agency: Rajiv Gandhi Housing Corporation Limited

Implementing Agency: Karnataka State Habitat Center

Supporting Organization : CDD Society

Construction Period: 1 year

CapEx/beneficiary: Rs.2,000

OpEx/beneficiary: Rs. 4/ year

Area/beneficiary: 0.11 m² (Excluding landscape area)

MODULES ADOPTED

Settler: 1 no.

Tank volume: 60 m³

Anaerobic Baffle Reactor:

Volume: 65 m³

No of Chamber: 3 chambers on 3 streets

Anaerobic Filter:

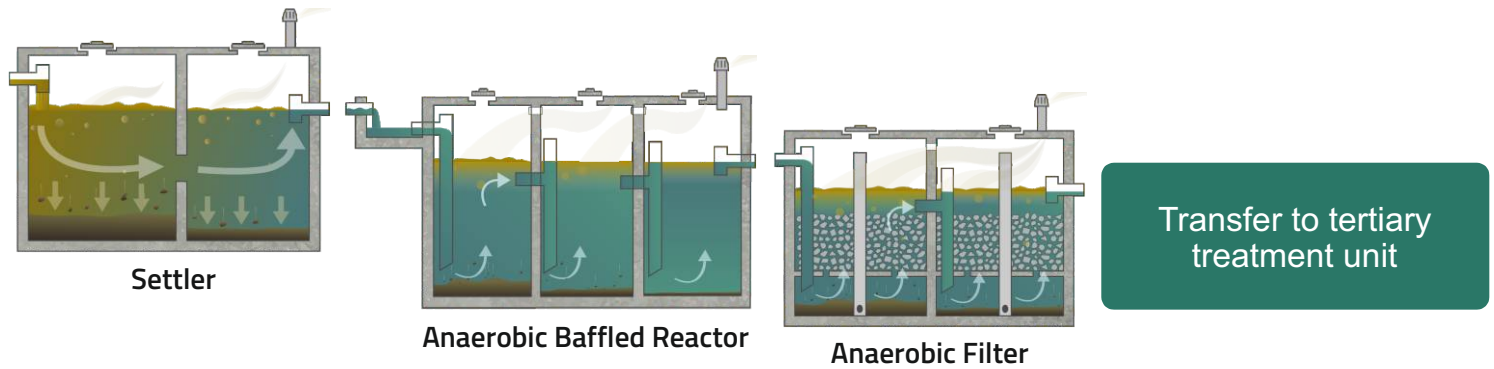
Volume: 100 m³

No. of chambers: 3 chambers on 3 streets

Total area of construction: 900 m²
(including the landscape area)



PROCESS FLOW DIAGRAM



OPERATION AND MAINTENANCE

The wastewater treatment plant is operated and maintained by the community, with support from Madapura Gram Panchayat.

Regular Maintenance:

- Checking of wastewater flow in the sewer system and treatment system.

Periodical maintenance:

- Removal of sludge from the Settler, Anaerobic Baffle Reactor and Anaerobic Filters once in 3 years.



Completed DEWATS™ system at Madapura



After excavation and finishing PCC (Plain cement concrete) work




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 Survey No.205 (Opp. Beedi Workers Colony),
Kommaghatta Road, Bandemath Kengeri Satellite Town,
Bangalore 560 060, Karnataka, India.

 +91-80-28486700

 bangalore@cddindia.org