

CSE Online Impact Workshop cum Master Class

On Capacity building initiative for Citywide Water and Sanitation Management

Theme 2: Faecal Sludge and Decentralized Wastewater Management

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Training Attended: CSP 2016, SFD and FSSM 2018, SSP 2019

Designation and Organisation: Environmental Engineer,
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Topic of Presentation: Implementation of Faecal Sludge Management in
Sircilla city

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Sircilla Municipality – Faecal Sludge Treatment Plant



Master Plan Layout



FSTP, Sircilla



Shit Flow Diagram - Sircilla, India

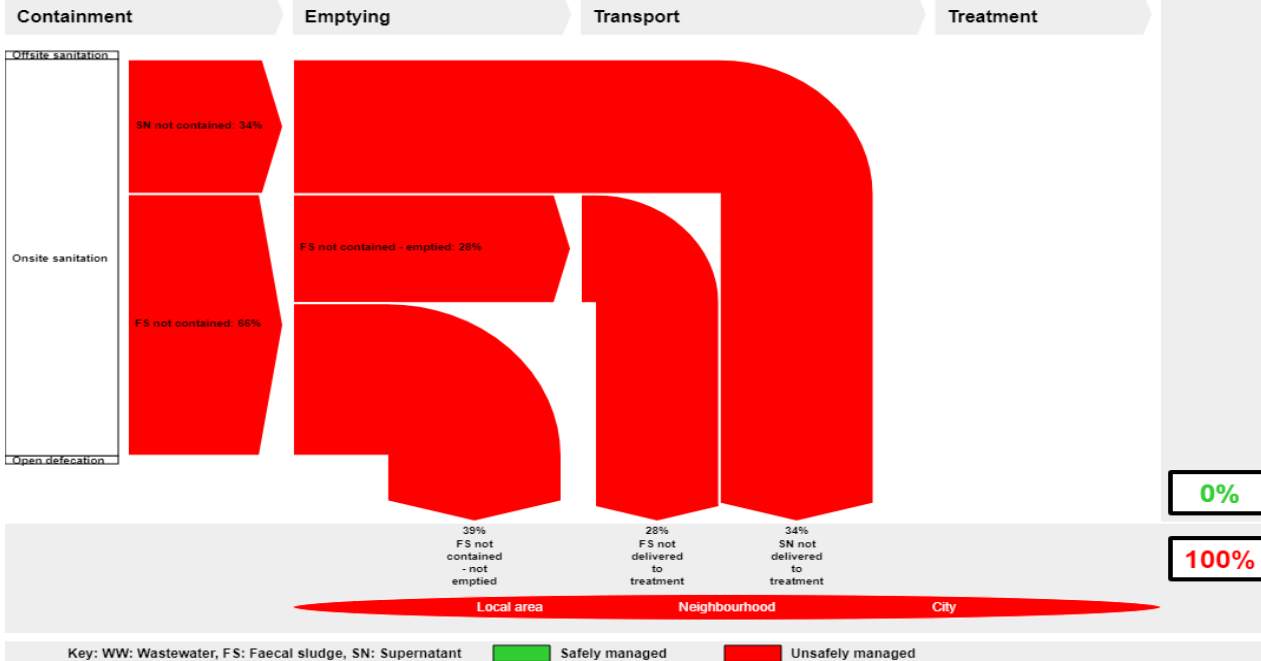
Sircilla, Telangana, India

Version: Draft

SFD Level: 1 - Initial SFD

Date prepared: 8 Aug 2018

Prepared by: CDD Society



The SFD Promotion Initiative recommends preparation of a report on the city context, the analysis carried out and data sources used to produce this graphic. Full details on how to create an SFD Report are available at: sfd.susana.org

- ❑ Shit Flow Diagram is a tool it shows the complete picture of a city excreta flows.
- ❑ Take up an initiative before every city should prepare the SFD.



Project Cost
₹ 1.6 crores



Project Implementation Time
12 months



Implementation Agency
Priyadhar Groups



FSTP Design Capacity
18 m³/day



FSTP Area
1970 m²



Objective: Safe disposal of faecal sludge, decreasing the pollution load on the environment, reduction in solids and pathogen content, and creating wastewater and sludge reuse opportunities.



Source: Septic tanks, Toilet pits (individual/public)



Quantity of FS: Current generation of FS based on collection is 9-12 m³/day. For the year 2025 – considering scheduled desludging and the merger of neighboring villages, the collection is expected to increase to 18 m³/day.



Effluent Quality: BOD less than 20 mg/L and a COD less than 50 mg/L (CPCB norms).



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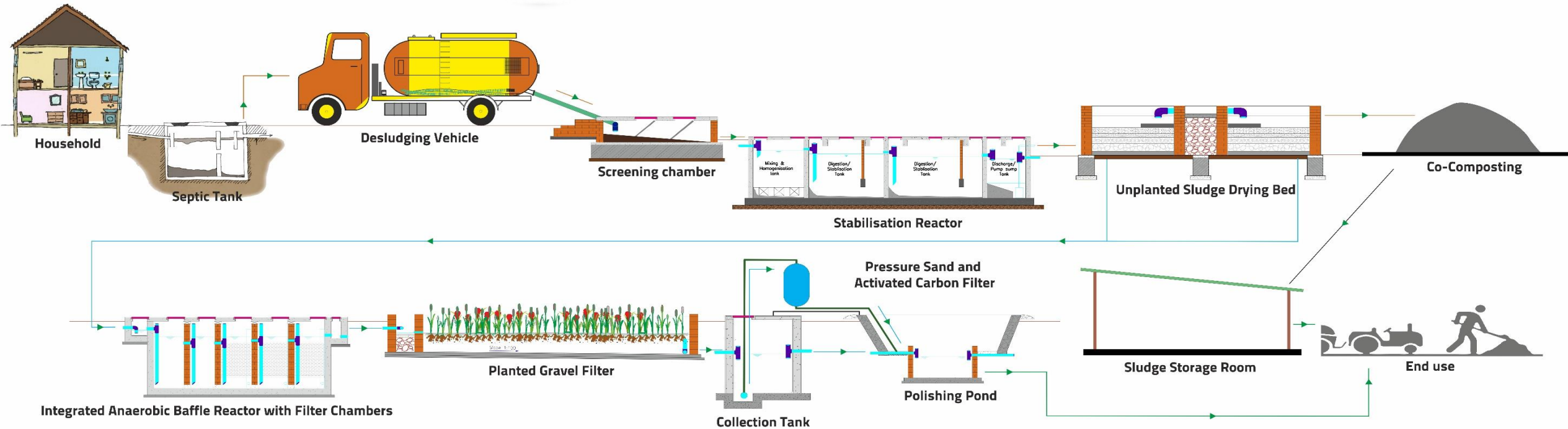


Nature Based Solution – Modules used in FSTP, Sircilla

Modules	Description
Screening Chamber	Screening of Solid Waste from faecal sludge
Stabilisation Reactor	Homogenisation and Stabilisation of faecal sludge
Unplanted Sludge Drying Bed	Dewatering of faecal sludge- Liquid portion treated in a percolate treatment plant
Integrated ABR with Filter Chambers	Secondary treatment of percolate from sludge drying bed
Planted Gravel Filter	Tertiary treatment of percolate
Collection Tank	Storage, pressure sand and activated carbon filter feeder tank
Sand and carbon filter	Post treatment of treated wastewater
Polishing Pond	Disinfection of treated wastewater and storage before final reuse
Co-Composting	Pathogen inactivation in dried sludge
Sludge Storage Room	Storage of processed and excess sludge for sale



Co-composting with organic solid waste & Process flow



- Dried bio-solids are co-composted with organic solid waste
- 60-90 days of processing time
- Pathogen reduction in the bio-solids due to temperature more than 60 °C for more than 15 days
- Compost is organic fertiliser that can be sold



- ☐ There is a lot of change has been placed before and after situations.
- ☐ The 5 No. of licensed private operators are happy with this FSTP, why because earlier they are disposed illegally into open ground or stormwater drain with fear.
- ☐ Some times the operators are threatened by the surrounding people.
- ☐ They are happy to bring the loads into the FSTP.
- ☐ They are provided with the PPE and an identity card for emptying service and they feel proud and respect, why because the public is recognizing their service.
- ☐ Farmers know the importance of the natural manure.
- ☐ They are asking to buy natural manure to utilize in fields. Especially the demand from the mango farmers.
- ☐ Now the faecal sludge managed in safe manner .
- ☐ Created the wastewater reuse options.
- ☐ Decreased the pollution load to the environment.

Future Plan:

- ☐ To involve the SHG women in sanitation sector.
- ☐ To create livelihood to the SHGs to involving into the emptying service.
- ☐ Procure a vacuum truck through their TLF fund.
- ☐ To handover the FSTP to SHGs for Operations and Maintenance



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- ❑ CSE and GIZ jointly conducted the capacity building training on City Sanitation Plan, I attended the couple of training programs, which is helped me a lot to prepare the draft DPR for our city.
- ❑ Based on that, whatever we find the gaps, the proposal has been made and put into place before the council to convince to construct the FSTP in our city.
- ❑ CSE's residential training program Shit Flow Diagram is helped so much to prepare the SFD of our city using the SFD tool.
- ❑ CSE's training program Sanitation Safety Plan is helped me too in on-ground situations in how to tackle and overcome the situations while implementing the FSM policy in our city.
- ❑ CSE's training program Nature-based solutions are given so much knowledge on technologies we have and helped me to design the modules for FSTP.
- ❑ Whatever the knowledge I acquired through the trainings, it's used in my professional career.
- ❑ My efforts in sanitation have been making a lot of change in my cities entity.



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