

Overview of DSK's FSM Activities

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Background and problems

- Dhaka a city of 15 million pop
- DNCC approximately 5 million pop
- Very limited sewerage
- Pit , Septic Tank and open defecation are polluting Rivers and water bodies
- Private sector apathy
- DSK action pilots on FSM
- Dhaka lacks formal fecal sludge and septage management policy and procedures

FSM Scenario in Dhaka

- In Dhaka FS produced is 2,740,893 cubic meter per day.
 - 80% going untreated (Aftab, Opel, Bashar)
- Sludge treatment at Pagla, Naryangonj on 300 acres of land (1980), upgraded in 1991
- Sewerage system covers less than 20% of the population in Dhaka
- No dumping site for FSM
- Private operators dispose FS to low land, drains and canals
- Widespread pollution of rivers and open water bodies in Dhaka
- Public Health threat and environmental pollution
- No GO initiative for FSM

Market Penetration

- Engagement with Manual emptier
- Customers bring customers
- Mobile response
- DWASA contractors
- Leaflet distribution
- Video Clip
- Coordination with DNCC & DWASA

DEWATS : Bauniabadh Low Income Community Housing : Sanitation Scenario

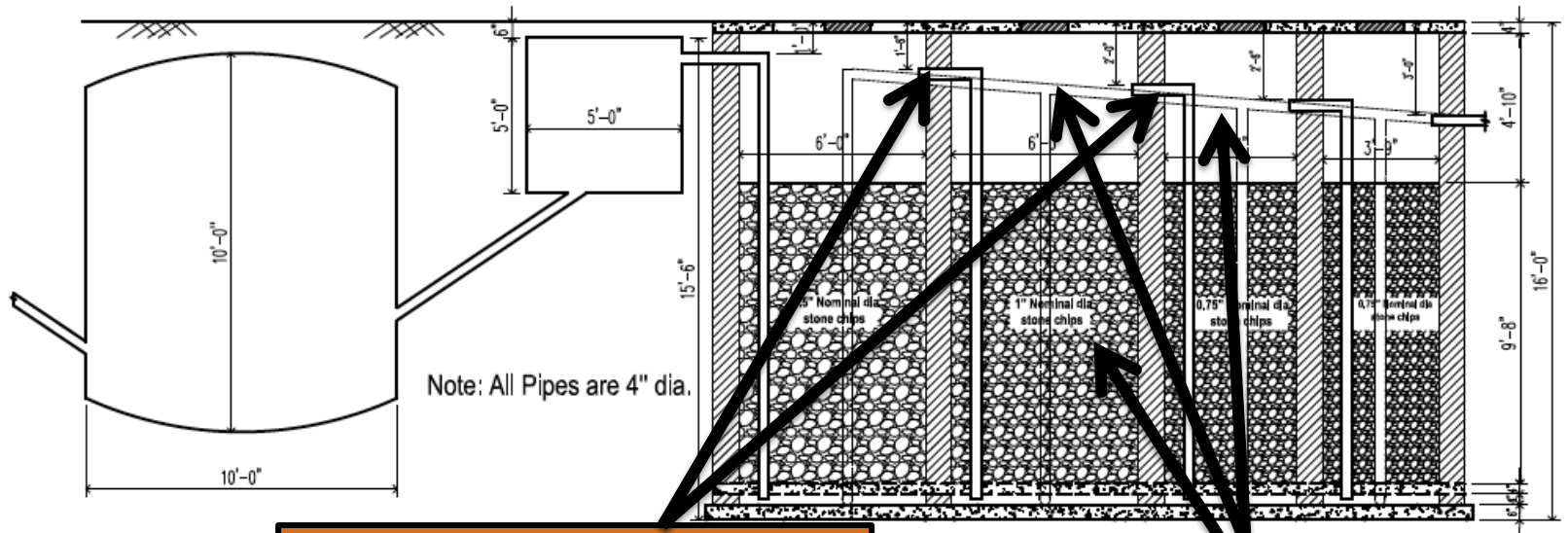
- Effluent from the sludge digester was carried out to nearby open water body.
- No separate sewage treatment system existed in the community.



Decentralized Wastewater Treatment Plant Unit (DEWATS modified)

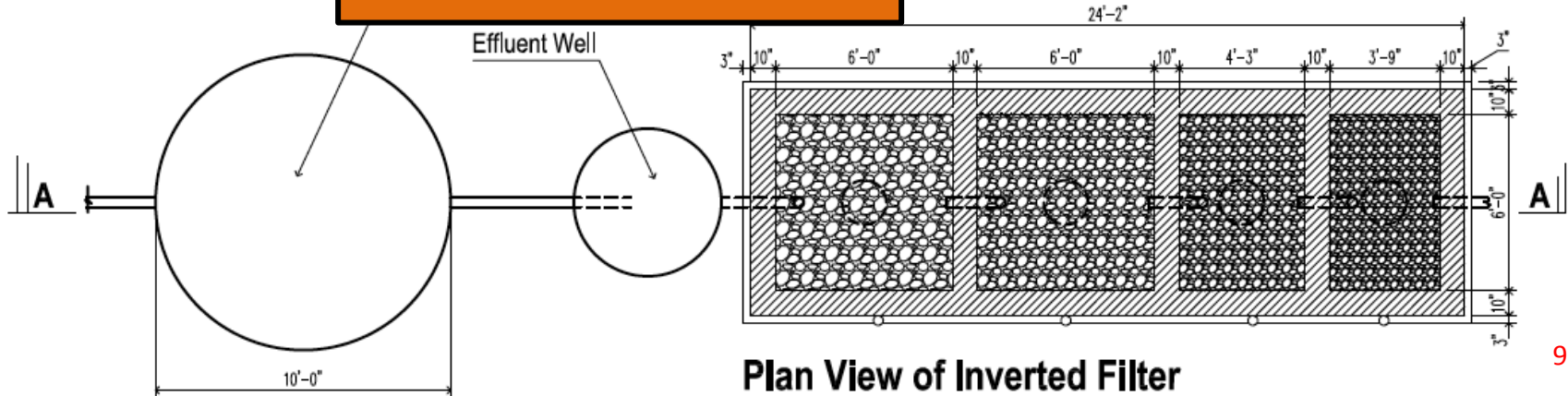
- Design was made using the initial wastewater analysis data collected on January 14, 2013 with appropriate factor of safety.
- Unit consisted of four consecutive up-flow filtration chambers filled with stone chips.
- Stone chips size was varied between chambers.

Layout of Proposed Decentralized Wastewater Treatment Plant Unit



Hydraulic Gradient Maintained

Backwashing Option



Summary

- The results indicated significant improvement in wastewater quality (76% reduction in BoD and COD).
- However the treated wastewater still needs to meet the discharge quality standards set by DoE (ECR, 1997).
- Several wastewater sampling and quality analysis is important to assess the variations in wastewater quality in the design stage.

BMGF : City Partnership Round -1

- To establish a detail analysis of (DNCC) policies, procedures, budget, roles and decision process related to Sanitation service delivery and status at present.
- On the basis of gap to arrive at a Sanitation regulatory frame work
 - Policy incentive for private sector engagement
- A detail PP on the basis of proposed regulatory framework
- DSK FSM service strengthening

Deliverables

- A review report on DNCC policy procedures related to Sanitation services prepared.
- Prepare a communication strategy for Vacutug service also available.
- A business plan for DSK FSM service prepared.
- A video clip for public awareness building produced.
- A gap analysis and a proposed framework or guideline to establish a standard FSM service and Septage management in Dhaka. Report at hand.
- A detail project proposal by DNCC+DSK for second phase, translating FSM regulatory framework into action. PP was submitted.

Challenges

- Absence of FSM Policy and procedures
- Septic Tanks are connected to storm water drains (No demand)
- Rivers and open water bodies are getting polluted beyond treatment
- There is no binding to clean STs and bar to connecting to storm water drains
- Low awareness
- Manual cleaning relatively cheap
- Soil condition with low porosity
- Heavy Traffic Jam in Dhaka
- Long distance towards dumping site

General Way Forward

- A momentum has been created in Dhaka to take FSM agenda forward
- GoB has formed a committee to draft a FSM regulatory framework led by ITN-BUET
- GO supported public campaign on FSM is critical.
- Incentives to FSM service providers also important.
- Public health and preservation of environment is critical.
- Availability of FSM treatment facilities.
- Tariff structure to encourage FSM payments by city dwellers