Investigation of Existing Financial Position of FSM Service in Charali town - Nepal

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1. Introduction

Charali is a small town in Jhapa district in the eastern part of Nepal with a population of 12,700. The town is served with On-site Sanitation Systems (OSSs) with 83% toilet coverage; out of which 4% is Septic tank and 96% are pits (with or without ring). A pilot Faecal Sludge Treatment Plant (FSTP) was constructed with the support of the Bill and Melinda Gates Foundation through Asian Development Bank - ADB's Sanitation Trust Fund. This paper investigates management model and financial position of Faecal Sludge Management (FSM) i.e. desludging service provided by private operator within the Public Private & Community Partnership (PPCP) and FSTP management.

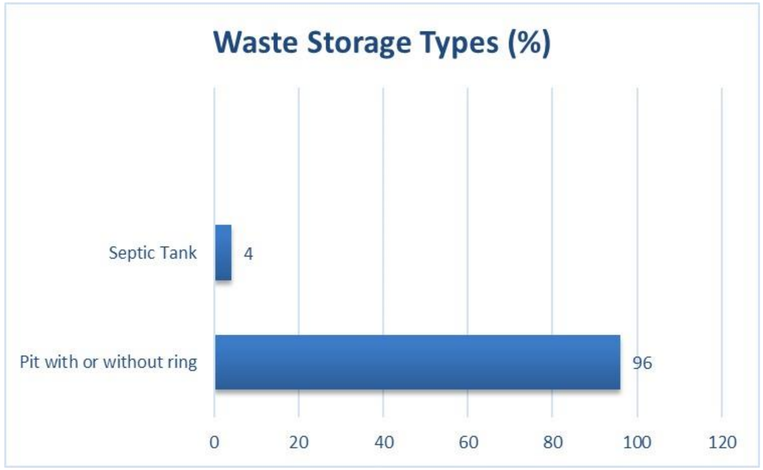
2. Methodology

The paper is based on literature review of project documents; key informant interviews with randomly selected households and key FSM stakeholders to collect the financial information and determining the financial position.

Key Assumptions:

1. Emptying business started with existing cesspool vehicles
2. 60% desludging operation efficiency in the first year
3. On demand desludging service for 5 years
4. FSTP has treatment capacity of 27 m^3/ day, and treated dried sludge production will take place after 1.5 years of operation
5. Capital costs are excluded from the financial analysis since these are funded as grants and is only focused for the sustainable operation of FSM services.

3. Findings/ Result



Management Model:

The management model for Faecal Sludge Treatment Plant (FSTP) operation at Charali is planned with three different offices;

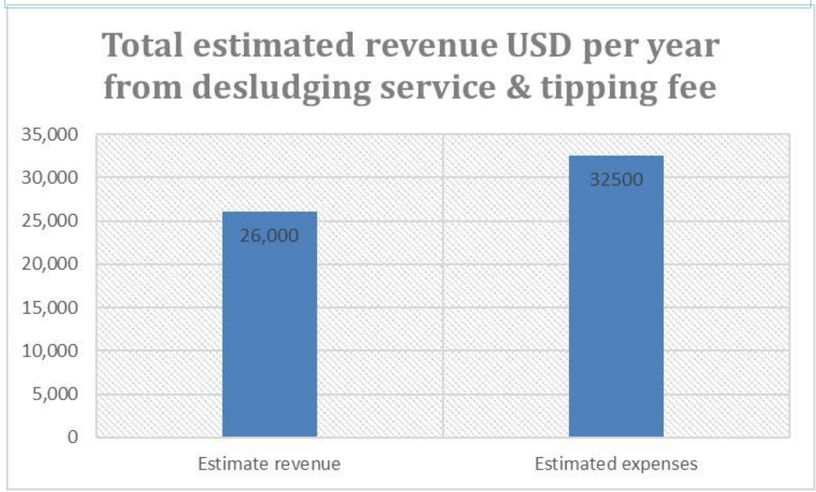
(i) Contact office as service center for information collection,
(ii) Site office to schedule the desludging operation and
(iii) Water, Sanitation Users' Committee (WSUC) office to handle financial matters.

This management model allows interaction among users, desludgers, contact office, WSUC and FSTP unit. Within the Public Private & Community Partnership (PPCP) investment model, private entity bears the costs by providing the technical support such as operation and maintenance aspects of a FSTP.

Main source of revenue generation: is from the desludging service and tipping fee, which is estimated to be about **USD 26,500 (NPR 3,435,000) per annum**. Out of which 71%, 6%, 7%, 4%, 10% and 1% income estimations are done from desludging from Households (HH) with Pits, HH with Septic tanks, Government institutions, Educational institutions, Private/ Business organizations and Private tankers (tipping only) respectively. (*please refer graph 2*)

The expenditure is estimated to be **USD 32,500 (NPR 4,219,000) per annum**, which primarily covers the Human Resource (49%), Operation and Maintenance (O&M) (47%) and Marketing & Promotion (4%). It is understandable that human resources cost is the highest because the FSTP is based on natural treatment system.

For the O&M expenses, fuel comprised a highest share (45%) followed by laboratory – sampling and analysis (18%). From the income and expenditure analysis, it is found out that the FSM is making a loss of USD 6,000 (NPR 783,000) per annum.



4. Conclusion & Recommendations

An increase in 25% in the desludging fee has to be made in order to make this FSM financially sustainable (considering the O&M expenses cannot be reduced). In cooperation with the municipality, a subsidy support would be helpful to cover the increment cost for households. The subsidy can be planned through direct contribution of municipality or indirectly through annual applicable taxes. Additional income can be made with commercial compost production and sales after 1.5 years of operation of the FSTP. For long run, **a scheduled desludging service at a frequency of 3 years is recommended** for regular minimum income assurance.

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