

Faecal Sludge Management in Kushtia Municipality

Ranver Ahmed
Town Planner, Kushtia Municipality
Kushtia, Bangladesh
Email : ranver.jugia@gmail.com
Cell : +880 1731 217239

Institutional Structure of Sanitation Service

- ❑ The Municipality has the sole responsibility of providing sanitation services within the city. It has **Water Supply and Sanitation wing** under **Engineering Department** to provide the services.
- ❑ Usually the Municipality provides this services to the citizen with it's own source revenue like **Holding Tax and Vacutug Service Charge**. Central Government sometimes come with different **development partner** to help the municipality through technical as well as financial support.
- ❑ The **Central Government** formulates different **concerned rules and regulations** and the municipalities has to provide the services in accordance to that rules and regulation.
- ❑ The overall sanitation situation is at first assessed by the **Water Supply & Sanitation Standing Committee**, then they proceed it to **Town Level Coordination Committee (TLCC)**, then the TLCC send it to Municipality Council's **General Meeting**.

FSM Situation in Kushtia Municipality

- ❑ Kushtia Municipality is providing septic-tank and pit latrine emptying services through **Vacutug** since 2004. Municipality started managing this faecal sludge through **co-composting technology** since 2012 with the help from UN-ESCAP and waste Concern. SNV Netherlands Development Organization is helping the municipality in FSM since 2014.
- ❑ Vacutug operation got the pace since 2013 as the municipality got the technology of managing faecal sludge. Now, the municipality has **4 Vacutug** which have the capacity of 500 Lt., 1000 Lt., 2000 Lt., and 4000 Lt. respectively.
- ❑ The present **Faecal Sludge Treatment Plant (FTP)** capacity of the municipality is about 4,000 Lt. per day which is much lower than the actual demand of about 12,000-13,000 Lt. Per day.
- ❑ The Municipality also has a **Coco-pit Filter** in the FTP for the treatment of the liquid waste water comes from vacutug.



Vacutug Service in Kushtia Municipality

- ❑ Before 2013, the municipality only **charge the fuel cost** to the city dweller for emptying services which incur a huge amount of subsidy to this sector.
- ❑ Municipality provides a lot of **awareness campaign** for the city dweller to use municipal vacutug service for their septic-tank and pit latrine emptying.
- ❑ The municipality imposed a fixed service charge for vacutug service from 2013 with the vision of **developing a regular mechanism** for this service with **financial calculation**. Observing still a significant loss, the municipality revised the vacutug service charge in August 2016.

Vacutug Service Charge (In BDT), effective from Feb 2013 to Jul 2016			
Irrespective of vacutug Size			
1	Septic Tank	800-1000/-	+ 15% Vat
2	Pit Latrine	300-500/-	

Vacutug Service Charge (In BDT), effective from Aug 2016					
Septic Tank					
Sl	Trip/Vacutug Size	1000 Lt.	2000 Lt.	4000 Lt.	Vat
1	1 st Trip	800/-	1000/-	1200/-	15%
2	Every Next Trip	200/-	300/-	500/-	
Pit Latrine					
3	Full Empty	500/-			15%

Vacutug Service- Income & Expenditure analysis

Income & Expenditure on Vacutug Operation in 2016 (In BDT)				
Sl.	Month	Income	Expenditure	Subsidy
1	January	67,900/-	82,600/-	14,700/-
2	February	71,200/-	84,500/-	13,300/-
3	March	65,400/-	81,800/-	16,400/-
4	April	57,000/-	76,500/-	19,500/-
5	May	42,200/-	60,700/-	18,500/-
6	June	59,500/-	76,800/-	17,300/-
7	July	50,300/-	66,600/-	16,300/-
	Total	4,13,500/-	5,29,500/-	1,16,000/-
	Average	59,071/-	75,643/-	16,571/-

Income & Expenditure on Vacutug Operation in 2017 (In BDT)				
Sl.	Month	Income	Expenditure	Profit
1	January	1,28,500/-	1,16,500/-	12,000/-
2	February	1,34,400/-	1,22,900/-	11,500/-
3	March	83,800/-	78,700/-	5,100/-
4	April	86,000/-	80,500/-	5,500/-
5	May	91,900/-	82,500/-	9,400/-
6	June	89,600/-	82,000/-	7,600/-
7	July	95,600/-	89,700/-	5,900/-
	Total	7,09,800/-	6,52,800/-	57,000/-
	Average	1,01,400/-	93,257/-	8,143/-

* Expenditure includes salaries & wages, fuel cost, maintenance cost, other costs, etc

* Depreciation is not considered in expenditure

Status of Co-composting

- ❑ The municipality has outsourced its compost plant to Aprozashi Ltd. since July 2016 for 2 years initially. Aprozashi Ltd. has started co-composting from October 2016.
- ❑ Aprozashi Ltd. is using 40% Faecal Sludge, 40% Organic waste, 15% Cow Dung, and 5% of Saw-dust for co-composting.
- ❑ In the last 4 months, Aprozashi Ltd. has produced 12 Tons of co-compost, i.e. 3 tons per month on an average. They sold 4 tons among them.

Initiatives related to FSM

- ❑ Sweepers database & capacity building (training) of the emptier to ensure safe and hygienic emptying services.
- ❑ Research on co-compost in Agriculture, Bangladesh Agricultural Research Institute (BARI), Jessore.
- ❑ Research on co-compost in Aquaculture, Department of Fisheries & Marine Resource Technology, Khulna University, Khulna.
- ❑ Supporting Central Governments initiative on development of FSM Institutional and Regulatory Framework.

Present Concern/Area to work

- ☐ Help Aprokashi Ltd. to run the Compost Plant effectively.
- ☐ Get a regular electricity line in the compost Plant.
- ☐ Expand the FSM services to newly extended area.
- ☐ Increase the capacity of the FTP.
- ☐ Evaluate the viability of the existing techniques used for FSM.
- ☐ Initiate research activities for different alternative techniques of faecal sludge management (FSM).

Future Plan

- ☐ Develop a sustainable financial plan for FSM in Kushtia.
- ☐ Develop a regular capacity building program for the emptier.
- ☐ Provisioning effective & efficient FSM infrastructure to attract private entrepreneur to come a make business.
- ☐ Develop a guideline for outsourcing Vacutug Service as well as Faecal sludge management service.

Thank You