From Research to Implementation: BRAC WASH Initiative for FSM in Urban Areas

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BRAC WASH Programme
# BRAC WASH scale at a glance
(May 2006 – December 2015)

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Working area</td>
<td>Total 250 sub-districts</td>
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<tr>
<td>Total population in working area</td>
<td>66.4 million</td>
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<tr>
<td>Number of people who received hygiene education from BRAC WASH</td>
<td>13.9 million per year in communities 2.9 million per year in schools</td>
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<tr>
<td>Number of people who gained access to hygienic latrines</td>
<td>41.6 million</td>
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<tr>
<td>Number of people who gained access to safe water (direct support only)</td>
<td>2.3 million</td>
</tr>
<tr>
<td>Established Village WASH Committees</td>
<td>65,566</td>
</tr>
<tr>
<td>Schools provided with WASH support</td>
<td>5,658</td>
</tr>
</tbody>
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FSM in rural area: methodology

- Treatment method development pathogen removal and nutrient enrichment
- Completion of successful filed trial both on laboratory and field condition
- Dissemination of FSM information to the community through communication materials like leaflets, brochures, etc.
Action research for small urban areas

- Desludging operation in four sub-districts of Bangladesh
- Pre-treatment of faecal sludge
- Post-treatment of faecal sludge (co-composting)
Action research for small urban areas (cont..)

• Valorisation of faecal sludge based fertiliser by pelletisation

• Field trial on spinach through different treatment of faecal sludge based fertiliser

• Market research on willingness to pay for the service
Action research for FS to energy

Reducing greenhouse gas emission through the processing of human fecal sludge, animal and agricultural waste into biogas
Action research for FS to energy (Contd..)

- Sludge collection from pit and transport by vacutug to the treatment site
- Sludge processing and anaerobic digestion
- Sludge collection, sampling and laboratory treatment for safe pathogen deactivation method
Urban intervention: Jamalpur

- Jamalpur is a district town situated in the northern side of Bangladesh.
- Total number of households 35,375 and population 148,219.
- 3 green markets in the municipality area.
- Municipality has got cleaning staff and logistics for solid waste cleaning.
- No treatment operation for FSM and MSW.
Operation Design

- Formation of pit/septic tank emptiers group
- Health and occupational safety training of the emptiers
- Activation of the treatment plant
- Training local entrepreneur for waste treatment plant operation
Development of low cost vacutug

- Development of a low cost country made vacutug
- Capacity of carrying 700 L
- Operated by two persons
- Construction Cost USD 2500
Plant design and coverage

- Constructed wetland based treatment facility
- Capacity of processing 300000 L wastewater per year
- Capacity of processing 100 Mg MSW per year
- Can produce 45 Mg of compost per year
Major Obstacle
Thank you