Training for the Town Panchayat officers on FSM and training for desludging operators and masons has been planned.

Demonstration/Resource Site
The FSTP site is being developed as an educational and resource centre through development of signages, brochures, and training of personnel.

Karunguzhi Desludging Tool
An application has been developed to implement a process of scheduled cleaning and emptying of household septic tanks by the Karunguzhi Town Panchayat.

Capacity Building
Training for the Town Panchayat officers on FSM and training for desludging operators and masons has been planned.

Behaviour Change Communication
Drawings by schoolchildren on the importance of sanitation, World Toilet Day 2018
Sanitation awareness rally, World Toilet Day 2018

Karunguzhi, a Grade I Town Panchayat in Kancheepuram District, Tamil Nadu was identified by the Government of Tamil Nadu to demonstrate septage management. A pilot Fecal Sludge Treatment Plant (FSTP) was constructed in Karunguzhi to serve the needs of Karunguzhi and the adjacent municipality of Maduranthagam.

- **Population**: 12,485
- **Area**: 6 sq.km
- **No. of Wards**: 15
- **Households**: 3,075
- **Distance from Chennai**: 82.7 kms
- **Quantity of septage to be treated**: 23m³/Day
- **No. of loads per day**: 6 to 7 loads of 3m³ each

Sources: ^Census 2011; ^Directorate of Town Panchayat
Tamil Nadu, the most urbanised state in India has 684 Urban Local Bodies out of which 528 are categorised as Town Panchayats. A Town Panchayat is a transitional area, i.e. an area in transition from rural to urban. To ensure 100% urban sanitation coverage, the state has decided to implement Fecal Sludge Management (FSM) in most town panchayats.

As per Census 2011, 40% of the households in Karunguzhi have Individual Household Latrines (IHHLs). A significant number of these households have never emptied their septic/holding tanks and only 3% of the households reported regular desludging. According to government sources, the number of households with IHHL has increased to 90% in 2018 because of the Swachh Bharat Mission (SBM). The first FSTP in the state was constructed in Karunguzhi as a pilot demonstration project.

The FSTP is built on 2 acres and is expected to treat septage collected from about 3,000 households in Karunguzhi, and about 7,000 households in Maduranthagam. The FSTP is left for drying through natural processes. After drying, the sludge is stored in the sludge storage yard. The filtrate from the SDBs are conveyed to the Horizontal Planted Gravel Filter (HPGF) reducing the organic matter & nutrients. Pathogens are reduced through natural processes in the maturation pond. The treated effluent is collected in the filtrate sump. The treated water is reused for gardening. Co-composting of dried sludge with organic municipal solid waste.

Treated septage is being reused for gardening within the premises. The dried sludge is being co-composted with organic municipal solid waste.

Various steps are being taken to ensure sustainable Operation and Maintenance (O&M). The responsibility for O&M is being transitioned from a government department to a private player. A comprehensive service level agreement has been prepared to ensure requisite standards and safety of personnel are met.

Fecal Sludge Treatment Plant

<table>
<thead>
<tr>
<th>Treatment Process</th>
<th>Sludge Drying Bed (SDB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Emptying raw Fecal Sludge (FS) into the screen chamber</td>
<td>2. Bar screens remove floating debris and other coarse particles</td>
</tr>
<tr>
<td>3. FS enters the Sludge Drying beds (SDBs)</td>
<td>4. FS enters the Sludge Drying beds (SDBs)</td>
</tr>
<tr>
<td>5. After drying, the sludge is stored in the sludge storage yard</td>
<td>6. Pathogens are reduced through natural processes</td>
</tr>
<tr>
<td>7. The treated effluent is collected in the filtrate sump</td>
<td>10. Co-composting of dried sludge with organic municipal solid waste</td>
</tr>
</tbody>
</table>

FS is left for drying through natural processes. After drying, the sludge is stored in the sludge storage yard. The filtrate from the SDBs are conveyed to the Horizontal Planted Gravel Filter (HPGF) reducing the organic matter & nutrients.