State workshop on
‘Planning and implementing effective septage management –
Supporting city’s journey beyond ODF and improved river health in U.P’

October 2018
Tide Technocrats is a pioneering innovative environmental and sustainability consulting organization, based out of Bengaluru, India. Established in 1995, Tide Technocrats focuses on three areas for delivering impact:

- Tide Technocrats is an empaneled organization under Swachh Bharat Mission by the Ministry of Housing and Urban Affairs, Govt. of India and a member of the National Faecal Sludge and Septage Management Alliance. We are also partners to the Sustainable Sanitation Alliance (SuSanA) a global organization.

- In 2017, TTPL is a winner of the Urban Labs Innovation Challenge by uChicago Tata Centre of Development and finalist of the PFAN - USAID challenge for Smart Solutions for Adaptable Communities and Cities. In 2018, TTPL is a finalist in IHUWASH, a national challenge for WASH sector solutions for Mysuru, Udaipur and Faridabad.
Our Partners and Select Clients

Some of our esteemed clients are:

Our Partners:

[Logos of various clients and partners]
# Key Focus Areas

<table>
<thead>
<tr>
<th>Solid Waste Management</th>
<th>Sanitation</th>
<th>Renewable Energy</th>
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<tbody>
<tr>
<td>Municipal waste handling, collection, transportation, processing and disposal design</td>
<td>Faecal Sludge and Septage Treatment</td>
<td>Hydro Energy</td>
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<td>and implementation support</td>
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<tr>
<td>Preparing City Level SWM Plan / DPR</td>
<td>City Sanitation Plans</td>
<td>Biomass and Biogas Energy</td>
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<td>Project Management Consultancy (PMC) for SWM Projects</td>
<td>In situ treatment</td>
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<td>Independent Experts/ Advisory services / Third party inspection to SWM projects</td>
<td>Toilet surveys</td>
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<td>Prepare Design reports for composting, biogas, recycling systems, bioremediation, waste to energy and sanitary landfill facilities</td>
<td>Faecal sludge and septage characterization</td>
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<tr>
<td>Training for Operation &amp; Maintenance, efficiency improvement, Handholding support and Troubleshooting of existing SWM facilities</td>
<td>And Techno-Economic feasibility studies among others</td>
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Key Projects

- PMC for setting up and operating **750 TPD waste to composting plant** near Bengaluru
- Three **Faecal Sludge and Septage Treatment Plants** of 15 to 70 KLD capacity
- **City Sanitation plans** for 39 ULBs
- PMC for Collection and Transport and setting up **5 MW Waste to Energy** plant at Srinagar
- Preparation of feasibility report and DPR for **rehabilitation of defunct solid waste management landfill** site at Salem
- PMC for setting up in house waste processing facility at **Kempegowda International Airport**, Bengaluru
- Consultants to **Mysore city corporation** (Cleanest city 2015 & 2016) for handling 550 TPD of MSW
- Supported over 175 towns and cities in India, Afghanistan and Uganda
Non sewered sanitation value chain

User Interface

Transportation

Containment

Treatment

End product Usage
The three locations in India – Operational plants

- Wai, 70 KLD
- Narsapur, 15 KLD
- Warangal, 15 KLD

> 2500 KLD septage treated
Process Outcomes – Tide Technocrats Model

Bio Safety

Value Added Outputs

- All Weather Systems
- Sludge Treated
- Monitoring

Modular and Scalable

Quick setup

Easy Integration

Setup anywhere including solid waste management sites

Low footprint
Sanitation Resource Park
The Thermal Faecal Sludge and Septage treatment process goes through 6 stages:

1. **Receipt, Screening and Grit removal with storage**
   - Output: 1% to 5% solids

2. **Dewatering**
   - Output: 20% - 25% solids

3. **Pasteurization**

4. **Waste Water Treatment**
   - Output: 60% to 65% solids
   - Output 2: Biochar
   - Output 3: Thermal Energy

5. **Drying of sludge**

6. **Pyrolysis**

7. **End product usage**

**Thermal Energy Generation and Reuse**
Existing plant photos – Containerized solution
Typical Plant Layout – Non-containerized option
Thank you. Look forward to your questions...