TRANSFORMING URBAN ODISHA

TOWARDS INCLUSIVE AND AFFORDABLE SOLUTIONS FOR WATER AND SANITATION
Total Population in 115 Urban Local Bodies: 70 Lakh

Out of that 17 Lakh People live in slums

One fourth of Odisha urban population lives in slums

2919 slums across 115 ULBs

5 Municipal Corporations (More than 300,000 population)

48 Municipalities (More than 25,000 population)

62 Notified Area Councils (More than 10,000 population)
Universal Tap
Water Supply at Households in Odisha
CHALLENGES IN DRINKING WATER SECTOR

- Only 40% of the urban areas had pipe network
- Only 30% houses had house connections
- Low Pressure, Erratic & Intermittent supply
- People were largely dependent on handpump tube well & tanker supply
- Disparity in Water Availability – Between Cities & Within the City
- Deficit in Water Supply - 157 MLD
- No metering - Low Revenue Collection
- Water Loss - 54%
- No Community Connect
VISION OF CHANGE

100% house connections with adequate Quantity & Quality in all cities covering entire urban population.
• 107 out of 115 ULBs have 100% pipe network
• No. of house connections rose from 3 lakhs to 9.97 lakhs
• 96% households have piped water connection
• 105 out of 115 cities: 100% HC
• Remaining 10 cities to achieve 100% HC by Dec, 23.
• 24x7 Drink-From-Tap Supply in Puri (1st in India) and Gopalpur –
• 21 more cities on track to achieve DFT by Dec, 23.
• Presently 800 K people are getting 24x7 DFT in these 21 cities
• Bhubaneswar has become India’s 1st to have 100% House connections (Oct, 20) with 100% metering (Mar, 23)
• All cities To achieve 100% metering by Dec 24
• Presently 40% HC metered
DRINK FROM TAP MISSION: 24X7 SUPPLY

- **24X7** Water Supply of IS 10500 quality
- **100%** Metered Connections
- NRW reduced from ~ **50 % to ~15%**
- Smart Water Management: Industrial IoT based Real time Monitoring of Water Supply Quantity & Quality – **1st in India at a City Level**
- **97%** Revenue Collection
ENABLING POLICY MEASURES

- Right to Tap Water
- No to Hand pumps & public Stand posts
- Relaxation of house connection norms for the poor
- No need of Property ownership/lease deed
- Waiver of connection fee for Urban Poor
- Easy Instalment of connection fee for others @Rs 100/month
- Composite administrative approval – landmark action
ENABLING POLICY MEASURES

- Execution of House connection by Govt as Public Work –by amending Rules
- Exempting Public from getting Road cutting permission from Municipality & associated fees (Rs 10 K to 15 K):
- Reduction of Documentation for House Connection (From 14 Documents in Odisha reduced to 2, some states requires as many as 36 types of Documents for a House Connection)
- Community partnership- Jal sathi
ABSENCE OF COMMUNITY CONNECT

- Large Scale unauthorized Connection
- No Metering
- Poor Revenue Collection
- Poor Grievance redressal
- Low Customer Satisfaction
- Lack of community connect led to unpleasant situations on the ground
JALSAATHI

- Partnership with Women Self Help Groups

- Jalasathi empowered to manage water distribution at ward level

- Act as a bridge between Water Supply Agency & Consumers

- Performance linked Incentive System

ROLE OF JALSAATHI

- Reading water Meters
- Generating Bills
- Collecting Water user charges
- Field Water Quality Testing
- Facilitating Consumer Complaint Redressal
**Mission Mode Approach**

- **Mobilizing Funds through Convergence**
  - Infrastructure Drive (982 Projects, 3800 Crs)
- **Building the Team and Capacity Upgradation**
- **Enabling Policy Measures**
- **Community Partnership – Jal Saathi**
- **Including Inhouse staff & Local Contractors**
- **Universal Coverage with 100% House Connection**
- **Drink from tap**
- **Revenue collection**
- **100% metering**
- **NRW reduction**

**PATH FOLLOWED**

- **Moving to Higher orbit**
## Breaking the Myths

<table>
<thead>
<tr>
<th>Myth</th>
<th>Truth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Water Demand due to 24X7 Water Supply</td>
<td>Demand went up initially but stabilized soon &amp; remained constant – Impact of communication &amp; Metering</td>
</tr>
<tr>
<td>Increased Water Wastage &amp; Non-Revenue Water</td>
<td>Non-Revenue Water Reduced from 47% to 15%</td>
</tr>
<tr>
<td>High Operation &amp; Maintenance Cost</td>
<td>Almost same O&amp;M cost as Intermittent Supply, Increase in energy cost is compensated by lowered NRW. Operating Cost is around Rs. 15 per KL (Chennai Metro Water-Rs.36.81/KL)</td>
</tr>
<tr>
<td>Huge Manpower Required</td>
<td>No Additional Manpower taken: Jalsathi filled the Gap</td>
</tr>
<tr>
<td>High End External experts required</td>
<td>DFT is 100% skilled in Odisha and made in Odisha by our own in-house engineering capacity</td>
</tr>
<tr>
<td>High Capital Cost</td>
<td>NO (Rs 1800 (per capita) for upgrade from Intermittent supply to 24X7 DFT</td>
</tr>
<tr>
<td>Revenue Recovery Doubtful</td>
<td>97% Collection Efficiency in Puri.</td>
</tr>
</tbody>
</table>
FSM: NON-SEWERED COMMUNITY-LED SANITATION SOLUTION
## FSM: TRANSFORMING URBAN SANITATION

### VISION

100% black water treatment in all 115 ULBs of Odisha.

### CHALLENGES

1. Absence of underground sewer system and treatment systems
2. Large slum population and high prevalence of open defecation
3. Indiscriminate disposal of Faecal Sludge
4. Contamination of surface and ground water
5. Lack of public awareness and community ownership
6. Lack of Regulations and enforcement for FSSM

### STRATEGIES

1. Decentralized, non-sewered, low-technology, cost-effective & community-led solution.
2. Creation of FSSM infrastructure (IHHL, CT/PT, cesspool vehicles, SeTPs)
3. Partnership with Mission Shakti & transgender groups across FSM value chain
4. Formulation of FSSM Regulations and Enforcement
5. Public Awareness and Behaviour Change
### Status of Septage Management in 114 ULBs

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Status of Septage Management in 114 ULBs</th>
<th>No.</th>
<th>Capacity (in KLD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Septage generated in 115 ULBs</td>
<td></td>
<td>1425</td>
</tr>
<tr>
<td>2</td>
<td>Functional FSTPs</td>
<td>111</td>
<td>1917</td>
</tr>
<tr>
<td>3</td>
<td>Under Construction SeTPs to be completed</td>
<td>8</td>
<td>140</td>
</tr>
<tr>
<td>4</td>
<td>Total Capacity of SeTPs in 114 ULBs</td>
<td>119</td>
<td>2057</td>
</tr>
<tr>
<td>5</td>
<td>Surplus Capacity</td>
<td></td>
<td>612</td>
</tr>
</tbody>
</table>

**FSTPs in 109 cities**

**PATH FOLLOWED**
Women & TG SHG in O&M

Celebrating Community Partnership

100 FSTPs

100th FSTP handed over to Mission Shakti Group in Polasara NAC for Operation & Management
GARIMA: SAFETY, DIGNITY & WELFARE OF CORE SANITATION WORKERS

- Assured Minimum Wage
- Risk allowance 20%
- Livelihoods Support for the Family
- Pucca House
- Life Insurance & Health Insurance
- Free Education for Children
- Mobile Phone
- Two-Wheeler
- Periodic Health Check up
- Assured Minimum Wage Risk allowance 20%
- Mobile Phone

GARIMA: SAFETY, DIGNITY & WELFARE OF CORE SANITATION WORKERS
100% access to mechanised desludging services to all households

Adequate Cesspool Vehicle available for safe emptying of septic tanks

Use of PPE and equipment for safety of core sanitation workers

Procurement of mini cesspool vehicles for inaccessible areas
UNIVERSAL COVERAGE

Urban Rural Convergence for FSM

FSM DIGIT for ease of service delivery
ODISHA’S USED WATER MANAGEMENT

Domestic used water

- Blackwater
- Greywater

Sanitation Value Chain

- Containment
- Emptying
- Transport
- Treatment
- Reuse/Disposal

FSTP

Washing Clothes
Bathroom
Kitchen

Household level Intervention
Street level Intervention
LEVEL OF INTERVENTIONS

GREY WATER MANAGEMENT APPROACH

Household Level: Magic Soak Pits

Lane Level: Hybrid leach pit and absorption trenches

Community Level: Construction wetland/waste stabilisation pond

Out fall (City)Level: Waste stabilisation pond and maturation pond
IMPLEMENTATION STRATEGY

1. SELECTION OF CATCHMENT OF ONE MAIN DRAIN + ITS BRANCH DRAINS & TERTIARY DRAINS
2. CONDUCTING SURVEY OF HOUSEHOLDS IN THE CATCHMENT (INVOLVING SWACHH SATHIS)
3. CONDUCT LANE-LEVEL SURVEY - ROAD TYPE & WIDTH AND THEN LOCATING LANE LEVEL INTERVENTIONS (LEACH PIT + TRENCH)
4. PERCOLATION TEST OF SOIL TO DETERMINE ABSORPTION CAPACITY
5. FLOW MEASUREMENT IN DRAINS
6. TRENCH STRUCTURE SIZING
7. CONSTRUCTION OF STRUCTURES AT HOUSEHOLD, LANE LEVEL, COMMUNITY (INVOLVING WOMEN SELF HELP GROUPS)
8. FLOW MEASUREMENT IN DRAINS AFTER CONSTRUCTION, U/S & D/S

- Training the women Self Help Groups
- Identifying polluters discharging faecal sludge in drains
- Availability of space in backyard of house for magic pit construction
- Mapping of the drains
COMMUNITY PARTNERSHIP IN WATER & SANITATION

Jalsaathi - Water

Swachh Sathi - SWM

Grey Water Management

FSSM

THANK YOU
Lack of door-to-door collection
Lack of source segregation of waste
Lack of sustainable model for waste management
Contractor Driven Centralized Model
High Capex and Opex
High Land Requirement
“Truck and Dump” approach with very low Resource Recovery
Waste to Wealth model adopted
Decentralised with community partnership
Low tech scalable model with lesser land requirement in the midst of city
Extensive IEC and Capacity Building of Stakeholder

- SHGs operate & manage ensures community ownership and sustainability
- ICT tools for effective management
IMPACT CREATED

- 252 Micro Compost Centres (1137 TPD) and
- 214 Micro Recovery Facility (2240)
- Waste Processing increased from 10% to 85%.
- “Mo Khata” - compost produced is procured by Govt depts/open market

- 5061 women from 2650 SHG groups engaged
  Creating Livelihoods & Gender Parity
- Bio mining of all legacy waste dump sites initiated
- Elimination of Ghost garbages
- 80% O&M cost goes towards wages for SHGs
THANK YOU