



# TRANSFORMING URBAN ODISHA

**TOWARDS INCLUSIVE AND  
AFFORDABLE SOLUTIONS  
FOR WATER AND  
SANITATION**



# URBAN ODISHA

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)

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**48 Municipalities**  
(More than 25,000 population)

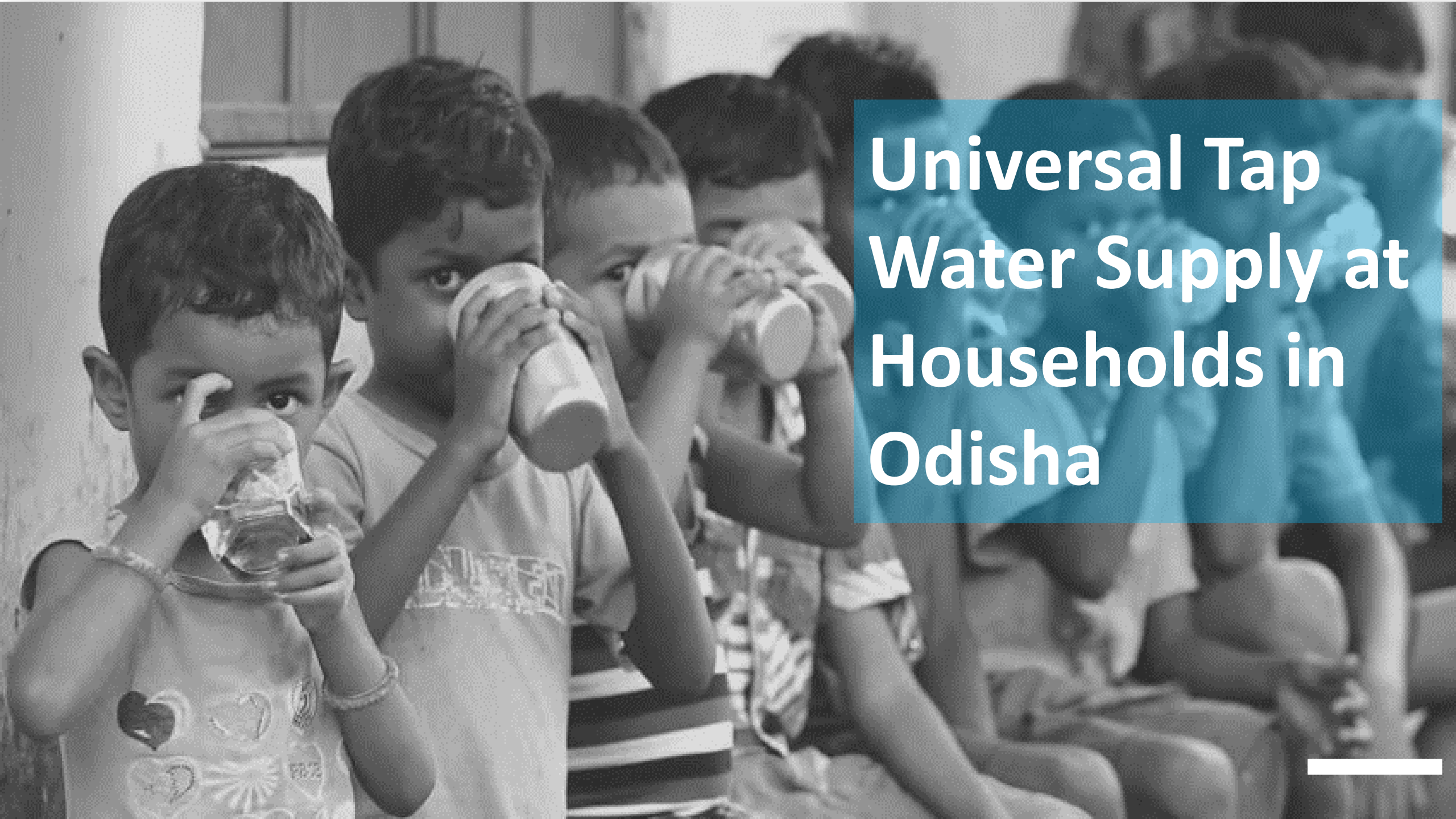
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**62 Notified Area Councils**  
(More than 10,000 population)

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# 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

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100% house connections with adequate  
Quantity & Quality in all cities covering entire  
urban population.





# where are we now

- **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

**Substantially eliminated waterborne diseases**

**No Deaths since 3 years**



# 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
- ✓ Jalsathi 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

# PATH FOLLOWED

Moving to Higher orbit

NRW  
reduction

100% metering

Drink from tap

Revenue collection

Community Partnership –  
Jal Saathi

Building the Team and  
Capacity Upgradation

Universal Coverage with  
100% House Connection

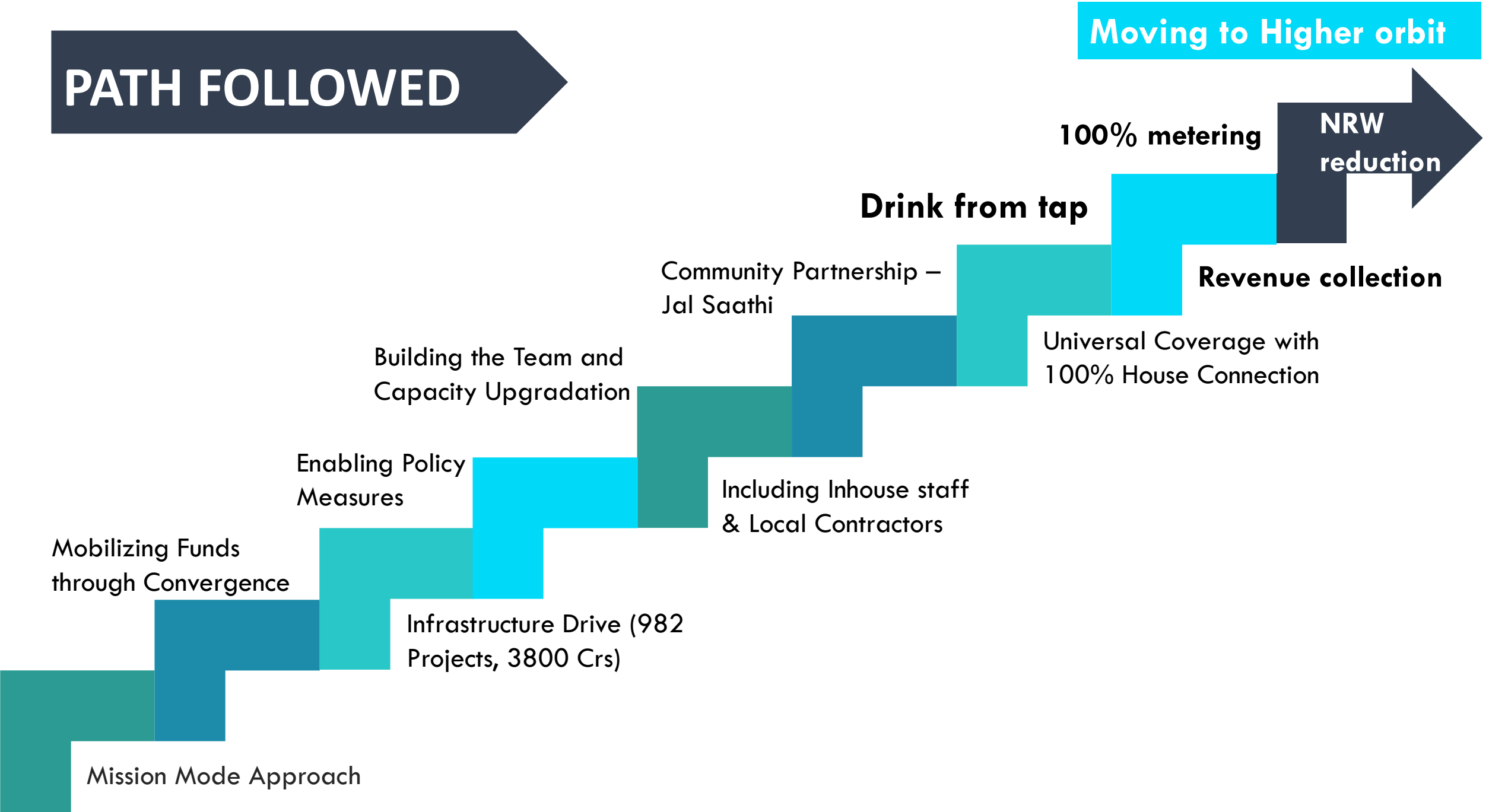
Enabling Policy  
Measures

Including Inhouse staff  
& Local Contractors

Mobilizing Funds  
through Convergence

Infrastructure Drive (982  
Projects, 3800 Crs)

Mission Mode Approach





# BREAKING THE MYTHS

| Myth  | Truth   |
|---|---|
| Increased Water Demand due to 24X7 Water Supply | Demand went up initially but stabilized soon & remained constant – Impact of communication & Metering   |
| Increased Water Wastage & Non-Revenue Water     | Non-Revenue Water Reduced from 47% to 15%   |
| High Operation & Maintenance Cost               | Almost same O&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) |
| Huge Manpower Required                          | No Additional Manpower taken: Jalsathi filled the Gap   |
| High End External experts required              | DFT is 100% skilled in Odisha and made in Odisha by our own in-house engineering capacity   |
| High Capital Cost                               | NO (Rs 1800 (per capita) for upgrade from Intermittent supply to 24X7 DFT   |
| Revenue Recovery Doubtful                       | 97% Collection Efficiency in Puri.  |



**FSM: NON-SEWERED  
COMMUNITY-LED  
SANITATION SOLUTION**



# FSM: TRANSFORMING URBAN SANITATION

## VISION

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

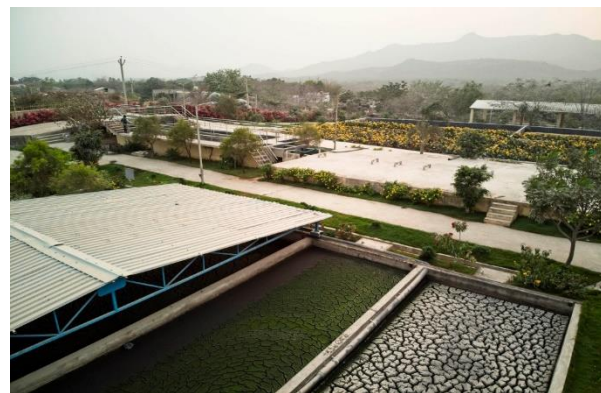
### CHALLENGES

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

# PATH FOLLOWED



| S. No. | Status of Septage Management in 114 ULBs | No. | Capacity (in KLD) |
|--------|--|-----|-------------------|
| 1      | Septage generated in 115 ULBs            |     | 1425              |
| 2      | Functional FSTPs                         | 111 | 1917              |
| 3      | Under Construction SeTPs to be completed | 8   | 140               |
| 4      | Total Capacity of SeTPs in 114 ULBs      | 119 | 2057              |
| 5      | Surplus Capacity                         |     | 612               |



# Women & TG SHG in O&M



100  
FSTPs

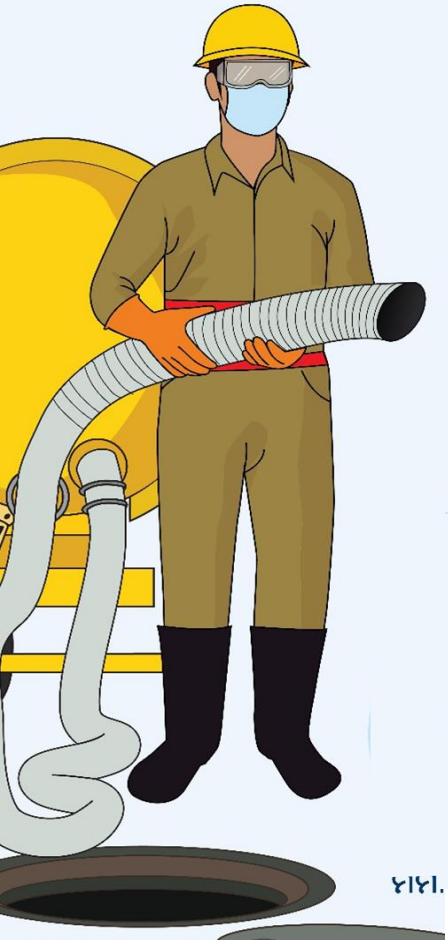
**Celebrating Community Partnership**



100<sup>th</sup> FSTP handed over to Mission Shakti Group in Polasara NAC for Operation & Management



# GARIMA: SAFETY, DIGNITY & WELFARE OF CORE SANITATION WORKERS



**Pucca House**



**Livelihoods Support for the Family**



**Life Insurance & Health Insurance**



**Mobile Phone**



**Free Education for Children**



**Two -Wheeler**



**Periodic Health Check up**



**Assured Minimum Wage  
Risk allowance 20%**



# FSM



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

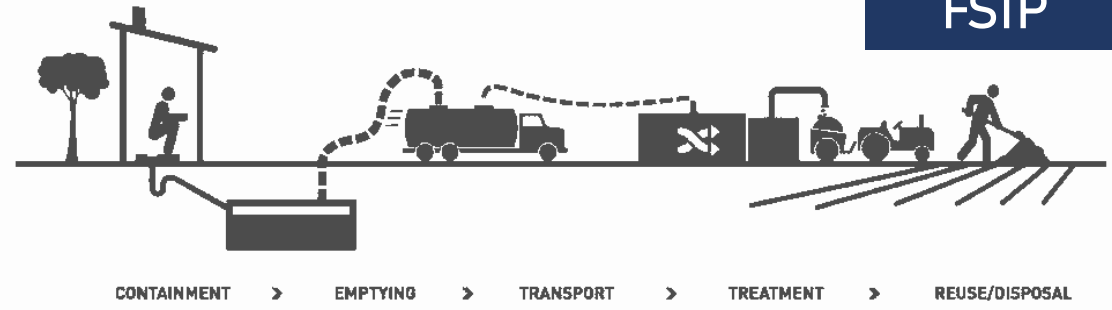
Blackwater



Greywater



Sanitation Value Chain



Washing Clothes



Bathroom



Kitchen



Household level Intervention



Street level Intervention



# GREY WATER MANAGEMENT APPROACH

## LEVEL OF INTERVENTIONS



**Household Level:**  
Magic Soak Pits



**Lane Level:**  
Hybrid leach pit and  
absorption trenches



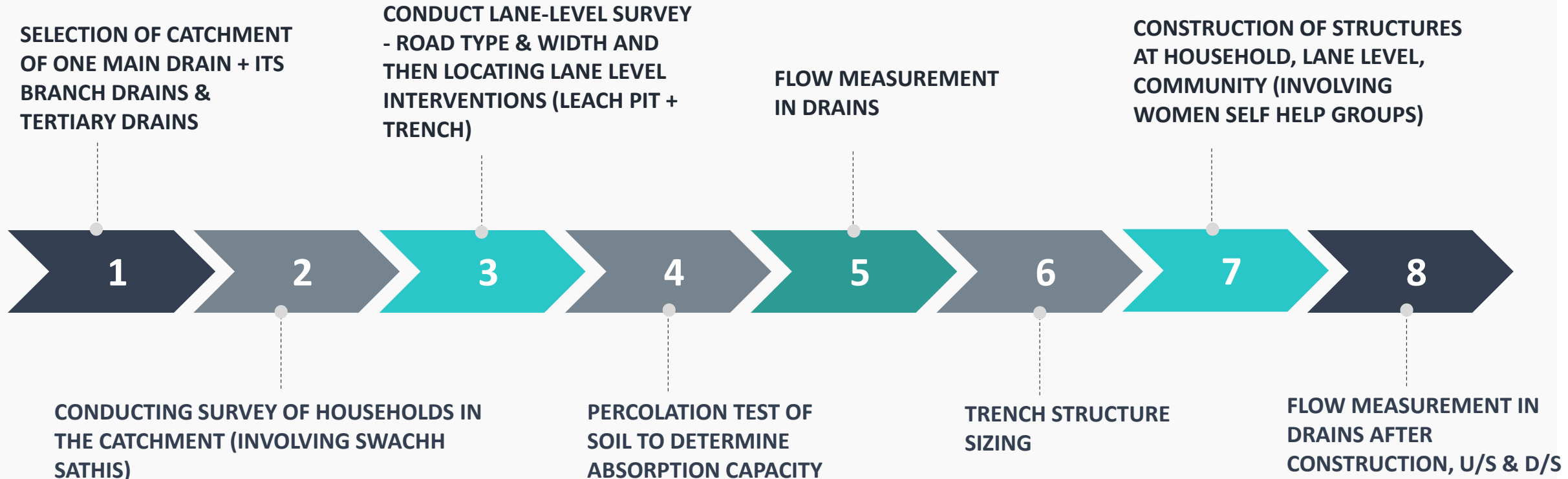
**Community Level:**  
Construction wetland/waste  
stabilisation pond



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



# IMPLEMENTATION STRATEGY



- 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



FSSM



Swachh Sathi - SWM



Grey Water Management

Latitude: 20.164319  
Longitude: 85.70943  
Elevation: 47.57±8 m  
Accuracy: 3 m  
Time: 10-2022 09

Powered By NoteCam

# THANK YOU



# SOLID WASTE MANAGEMENT: BEFORE

- ❑ 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





# VISION AND PATH OF CHANGE



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



- ❑ 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



# IMPACT CREATED



- ❑ 252 Micro Compost Centres (1 137 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**