

## FINISH Society's urban presence

In rapidly urbanising cities and towns, the standard of the living environment is under tremendous strain. Despite pre-eminent efforts, independent sectorial interventions tend not to work. Thus, the solution to tackle such an issue now is to discover service delivery and technological models that are feasible, practical, socially acceptable, institutionally compatible and commercially viable. It is also extremely essential to consider value chain recycling for resource recovery and thus ensuring a smooth transition to a circular economy. Improper management and disposal of solid waste has a severe impact on both human health as well as the physical environment.

FINISH Society (FS) is constantly coming up with new innovations including co-composting and decentralised community led sustainable models for SWM, municipal solid waste management, plastic waste management and used beverage cartons (UBCs) management. FS also provides technical support to develop scientific sanitary landfills which helps to reduce greenhouse gas emissions into the environment. It extends its technical expertise in rejuvenating lakes and water bodies by natural wetland technologies. In health and livelihood space, it caters to hospitals for distribution of UV chambers for rapid disinfection engaged in COVID -19 prevention. It is also working with the urban slum dwellers for reinvigorating migrant women's self-help groups into federations for promoting local businesses by skill development under entrepreneurial mentorship programmes.

### Solid waste management

FS works towards finding new approaches to involve the informal sector (formalisation of the informal sector) in the reconstruction of local waste management system. By analysing the role of the informal sector involved in the service and value chain and the level of community involvement in terms of policy formulation, implementation and evaluation.

Through a stakeholder driven process, FS takes up training and capacity building activities which are aimed at identifying tailor made technologies for different rural, peri-urban and urban fringes within the country. FINISH works towards identifying the resource recovery potential of different waste streams including both dry and wet waste and explores the practicability for commencing micro and small-scale businesses at local level in order to ensure self-sustaining waste management models.

FINISH Society has two models of operating in urban solid waste management space:

#### Model 1

To strengthen and provide technical support to the local bodies, Municipal Corporations, wards, etc. to well manage their household waste through effective participatory planning, capacity building and the introduction of sustainable waste management systems.

**Table 1: Projects implemented**

Sr. No	Projects	Partners	Location	Start date	End Date	Status	Households/ Beneficiaries
1	Community managed decentralised solid waste management programme	ITC Limited	Guntur, Andhra Pradesh	January, 2018	March, 2022	Ongoing	1,80,000 HH

2	Decentralised Urban Solid Waste Management	ITC Limited	Kapurthala, Punjab	April, 2021	March, 2022	Ongoing	15,000 HH
3	Decentralised sustainable and community led solid waste management model	Mahindra & Mahindra	Igatpuri, Maharashtra	March, 2021	March, 2023	Ongoing	1200 HH
4	Integrated Solid Waste Management in Urban	NSE Foundation	Karauli, Rajasthan	July, 2021	June, 2024	Ongoing	1328 HH
5	Used beverage carton management	Tetra Pak	Udaipur, Rajasthan	March, 2021	February, 2022	Ongoing	4000 HH
6	Plastic waste Management	UNDP	New town, Kolkata	June, 2021	June, 2022	Ongoing	20,000 HH
7	Plastic waste Management	UNDP	Amritsar, Punjab	October, 2020	January, 2022	Ongoing	5,00,000 HH
8	Capacity building through IEC in SWM, Sanitation and FSM	Nagar Nigam	Gaya, Bihar	April, 2021	April, 2022	Ongoing	5,00,000

1. With support from ITC Limited, FINISH is implementing community led sustainable solid waste management project in Shirur Taluka outskirts of Pune, Maharashtra. The programme started in October 2016 in selected wards of two peri-urban communities to demonstrate workable and scalable models. The key deliverables are:
  - a. Develop plan for waste collection
  - b. Provide technical support for setting up of MRF plant
  - c. Training and capacity building of green workers
  - d. Developing market linkages for waste products
  - e. Promoting decentralised techniques

The 2016-17 implementation strategy focused on establishing and demonstrating a regular system of waste collection in selected wards, awareness campaign on primary segregation, doing secondary segregation, capacity building of all stakeholders and workers and starting decentralised composting of wet waste. A group of women was identified, trained and supported by the ITC Limited Mission Sunehra Kal (MSK) programme for handling entire waste management value chain. A service fees was also introduced from the waste generators to finance cost of collection and processing fostering sustainability of this model. The model showed visible results and management of about 60% waste.

The following years 2018-20 focused more on strengthening the wards to implement an effective solid waste management system with FINISH's technical support. Door to door collection system was optimised, workers were trained and intensive source segregation awareness was carried out leading to reduce the disposal of waste from 90% to 40% from the operational areas. For local ownership residential committees were formed and decentralised waste management through home composting and cluster composting. The focus was more

on facilitating 80 percent source segregation in order to support maximum resource recovery. Managing the waste became the responsibility of the wards primarily with support from FINISH on the plan and execution. While coverage was expanded to entire region from 5,811 – 10,000 households by the year 2021-22.

2. The Guntur Urban SWM programme was initiated in 2018 and it aimed to strengthen the capacities of two medium-sized emerging wards in Guntur Municipal to better manage their household waste through effective participatory planning and the introduction of sustainable waste management systems. The project worked with the two chosen wards and a variety of local stakeholders, including the Guntur Municipal Corporation (GMC), community leaders, small-scale entrepreneurs, and local formal and informal sector enterprises that provide waste management services.

The key deliverables of the project were:

- ▶ Identifying critical gaps and addressing them by capacity building, training and handholding support to municipality staff
- ▶ Promoting models of decentralised waste management like cluster composters/home composter.
- ▶ Facilitating in developing nutrition /kitchen gardening.

This entire project was divided in 2 different phases. Phase one was to concentrate on source segregation of domestic waste; in which we have successfully impacted 90% source segregation of domestic waste into wet and dry waste .

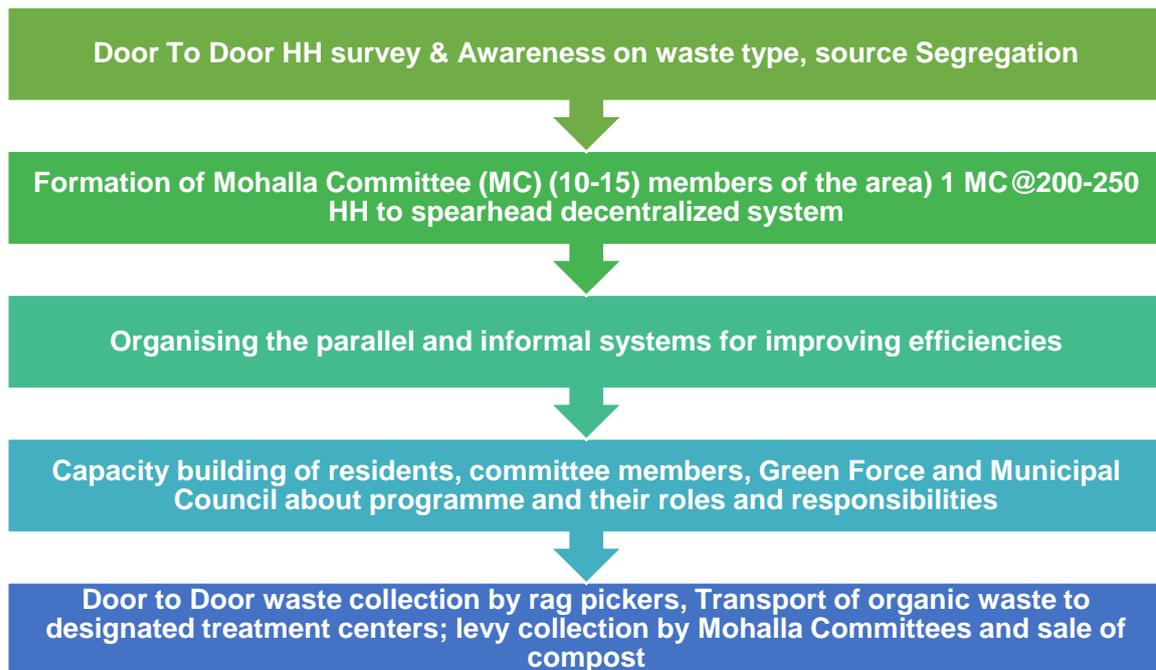
Our second phase was to work on safe disposal of that segregated wet waste by adopting organic way of home composting and cluster composting. The initial two phases helped us win the confidence and buy-in by the society Which led to expansion of the programme to 180,000 HHs with a cascading model of implementation

3. Programme on community owned decentralised urban solid waste management was initiated under ITC Limited Mission Sunehra Kal in Kapurthala town of Punjab. A decentralised model for waste management is aimed at minimizing and managing the waste at the source. The pillars of a decentralised waste management system are home composting, community composting and recycling all while aiming to ensure that the waste to landfill remains under 10%. As the key tenet of a decentralised system is waste management at source, the key stakeholders are the waste generators of the given locality. In a decentralised model, the responsibility of waste management remains with the waste generator and the role of the Government is limited to that of a facilitator to drive the community-based organisations for handling waste locally.

The key deliverables of the project are:

- ▶ Prepare DPR/Technical plan for rural and urban areas.
- ▶ Deploy team of mobilises to attain source segregation
- ▶ Develop linkages with suppliers for recycling opportunities
- ▶ Develop system of Levy collection,
- ▶ Identify, train and deploy waste collectors in respective localities

Based on the data from the survey and our observations a decentralised model was developed for 15000 households of Kapurthala town. Following diagram shows the model for waste management in Kapurthala town:



4. Decentralised sustainable and community led solid waste management model supported by Mahinda and Mahindra Limited in 1200 households of Igatpuri, Maharashtra. FINISH Society proposed a strategy focused on establishing and demonstrating a regular system of waste collection in selected wards, awareness campaign on primary segregation, secondary segregation, capacity building of all stakeholders and workers and starting decentralised composting of wet waste.

Door to door collection system was optimised, workers were trained and intensive source segregation awareness was carried out leading to reducing the disposal of waste from the operational areas. For local ownership residential committees were formed and decentralised waste management through home composting and cluster composting were encouraged at household and community levels. Facilitating in increasing source segregation in order to support maximum resource recovery.

5. Integrated Solid Waste Management in Urban and Rural Areas of Karauli, Rajasthan supported by NSE Foundation covering 1328 households.
6. Setting Up a Sustainable Model for Recycling of Used Beverage Cartons in 4000 Households of Udaipur, Rajasthan. The key deliverables of the project are:
  - ▶ Traceability of Tetrapak cartons along with other high value recyclable from municipal solid waste.
  - ▶ Identify key factors of sorting, storage and selling of UBCs
  - ▶ Analyse cost, budget and municipality SWM rules which are essential for institutionalisation of UBCs collections and recycling.
  - ▶ Collect 40 MT of UBC in a year
7. Plastic waste management and livelihood generation for safai sathis (green workers) supported by UNDP India and Coca Cola India Foundation (Anandana) in 5,00,000 households of Amritsar, Punjab and 20,000 households of New Town, with a special focus on developing material recovery facility (MRF). The key deliverables are

- ▶ Plastic collection 3 tons per month in Amritsar and 400 kg of plastic per month in New Town Kolkata
- ▶ Plastic free cities
- ▶ Developing material recovery facility

The strategy was divided into three phases: Inception and Start-up Phase (Mobilisation of Stakeholders), Implementation phase (establish collection enterprises and Swachhata Kendra), and Consolidation Phase.

8. Capacity building through Information Education Communication (IEC) for SWM, Sanitation and FSM officials and workers supported by Gaya Municipal Corporation, Gaya district of Bihar. FINISH Society conducted several training and capacity building programmes for providing technical knowledge to successfully implement municipal solid waste management, faecal sludge management and sanitation programmes by the district administration under Swachh Survekshan.

## Model 2

To directly implement solid waste management with entire service and value chain approach in collaboration with municipal corporations and or nagar palikas, through awareness generation, hiring, training and capacity building of waste workers and implementation of innovative waste to value techniques.

**Table 2: Projects implemented**

Sr. No.	Projects	Partners	Location	Start date	End Date	Status	Households/Beneficiaries
1	Door to Door waste collection	Dungarpur Nagar Parishad	Dungarpur, Rajasthan	April, 2017	March, 2022	Ongoing	11,000 HH
2	Udaipur Municipal Corporation - solid waste management (Door to Door waste collection)	Nagar Nigam	Udaipur, Rajasthan	August, 2018	May, 2021	Extended till July 24, ongoing	54,000 HH
3	Sanitary Landfill	Nagar Parishad	Dungarpur, Rajasthan	May, 2017	July, 2017	Completed	Whole Town

1. Udaipur Municipal Corporation - Direct implementation of solid waste management programme through awareness generation, training and capacity building aiming to cover door to door waste collection in 54,000 HHs in 30 wards of Udaipur. The key deliverables of the project are:
  - a. Ensuring Collection Efficiency
  - b. Ensuring Segregated Waste collection.
  - c. Ensuring Levy Collection through Participatory Dialogue
  - d. Ensuring Bin Free/Litter Free Zone
  - e. Composting of Organic waste and running Sorting centre
  - f. Training and capacity Building of stakeholders

FINISH team reaches out to all the families with every day waste collection in 28 vehicles. Around >90% waste segregation is taking place. Hiring and training of 40 sanitation workers including drivers have been done on waste handling, usage of safety equipment. Capacity

building is done on regular basis and their performance is monitored and the best worker is awarded to keep them motivated. Route is identified and mapping is done and stick to all 18 vehicles.

Monthly waste collected from the 30 wards is around 990 ton. A waste sorting centre is setup on a land provided by Udaipur Municipal Corporation where FINISH Society has employed 40 women workers for sorting and processing of waste. Wet waste is currently getting composted by windrow composting technique and dry waste is sorted in 20 different categories of plastic, papers, glass materials. All the sorted dry waste is sold out to a local kabariwala with an estimate amount of Rs. 90000 per month. It is planned to link the sorted dry waste to the bulk consumers to get better rates so that some part of salaries of the women waste workers are recovered. This is a very unique model of livelihood generation that gives meaning to the lives of poor women.

2. FINISH Society in collaboration with Dungarpur Nagar Parishad (Government of Rajasthan) is implementing a solid waste management project in Dungarpur. The project has the following key deliverables -
  - a. Door to door collection – 10 wards- 15 tons of waste every day is collected. Secondary segregation of dry and wet waste where wet waste is composted -5.5 ton per day and 650 kg compost is generated per day
  - b. Saleable / recyclable dry waste is linked to the market- 5 ton per day dry ton 100000 lakh per month
  - c. Ensuring Collection Efficiency
  - d. Ensuring Segregated Waste collection.
  - e. Ensuring Levy Collection through Participatory Dialogue
  - f. Ensuring Bin Free/Litter Free Zone
  - g. Composting of Organic waste and running Sorting centre
  - h. Training and capacity Building of stakeholders
  
3. Construction of scientific landfill for reducing greenhouse gas emissions. FINISH Society has facilitated in designing and constructing a scientific landfill. A sanitary landfill of capacity 2.5 tonnes/day is designed as per the current requirements of Dungarpur Municipality. The volume of 3800m<sup>3</sup> provided now is adequate for 5 years. And its life can be extended to a further 2 years when the quantity of non -degradable waste to be disposed by landfill method comes down to 1.5 tons per day. The segregated and non-saleable dry waste is dumped. The ultimate objective of municipal level waste management is a zero-landfill status.

## Liquid waste management

**Table 3: Projects implemented**

Sr. No	Projects	Partners	Location	Start date	End Date	Status	Water
1	Drainage Treatment Plant for Lake rejuvenation (Gap Sagar)	Dungarpur Nagar Parishad	Dungarpur, Rajasthan	June, 2018	September, 2021	Completed	20 KLD
2	Drainage Treatment	Dungarpur Nagar Parishad	Dungarpur, Rajasthan	June, 2018	September, 2021	Completed	50 KLD

	Plant (Suneria pond)						
<b>3</b>	Sembakkam Lake	The Nature Conservancy	Chennai, Tamil Nadu	November, 2019	December, 2020	Completed	7 MLD

1. Constructed Wet Land in Application: FS has developed two waste water treatment facilities in the Suneria Pond and Gap Sagar Lake in Dungarpur. The later has a plant capacity of 50m<sup>3</sup>/day (KLD) and is designed and constructed to treat greywater.

The drainage water now is treated before getting discharged into Soneriya Lake in Dungarpur and the treated water is being reused. Drainage Treatment Plant for Lake rejuvenation (Gap Sagar) benefits 300 HH, and Drainage Treatment Plant (Suneria pond) benefits 250 HH in Dungarpur.

2. Sembakkam Lake Rejuvenation, in Chennai, Tamil Nadu supported by The Nature Conservatory. FINISH Society with ILIFO and The Total Solution has designed a 7 MLD water treatment facility by adopting a hybrid methodology that uses a combination of mechanised and constructed wetland treatment systems. The facility is designed to treat unabated sewage that is flowing into the lake from neighboring areas. The outcome is to rejuvenate and turn Sembakkam lake into a natural wastewater treatment system.

## Health & Livelihood

**Table 4: Projects implemented**

Sr. No.	Projects	Partners	Location	Start date	End Date	Status	Households/Beneficiaries
1	Distribution of UV chambers for rapid disinfection in government hospitals engaged in COVID -19 prevention	Signify	5 districts of Uttar Pradesh	February, 2021	May, 2021	Completed	38 hospitals
2	SHG based enterprise (skill development)	PWC	Jawahar Nagar, Jaipur	December, 2020	May, 2021	Completed	200 women

1. Frontline COVID-19 fighters or Corona Fighters like health workers and hospital staff are at the maximum risk of infection from the novel Corona virus or COVID-19. Due to the high exposure and very high chances of infection amongst frontline COVID-19 fighters it is important that they have access to ways through which they are able to rapidly disinfect their personal objects to reduce their chances of contracting the disease.

In this regard, with the financial help from Signify Innovations India Ltd, FINISH Society provides disinfection chambers to facilities in 38 Government hospitals of UP. These disinfection chambers will use Ultraviolet-C (UVC) light to kill bacteria and viruses from surfaces within 5 minutes.

2. Jawahar Nagar Circle kacchi basti is one the of largest slum near bypass road in Jaipur, Rajasthan, populated with more than 50000 people. Like others, this slum also has its own issues of water, sanitation, and economic opportunities, needless to mention that covid

pandemic has aggravated the situation and overall living conditions of slum dwellers. To address this issue, School for Social Entrepreneurs (SSE) India & FINISH Society joined hands to implement an innovative entrepreneurial mentorship programme for reinvigorating migrant women's self-help groups into federations for promoting local businesses by skill development, supported by PwC India Foundation.

The programme started in January last year with around 25 women who are committed to become future entrepreneurs. The past one year has been spent in training these women on skill development and setting-up micro and group enterprises. Today, the women federation has grown to 200 strongly willed women and they are in the process of registering their own micro small company under the name of Hunar Shala (School of talent). Production and Resource Center has been started from 1<sup>st</sup> November 2021 by selecting a place in the nearest area of Jawahar Nagar Kachi Basti by the team to provide women a place for making, storing, selling, meeting and training their products.

