Understanding and Exploring the Business Models for Integration of SHGs/Waste Pickers in Waste Management Services for B & C class ULBs

under

the theme of 'Business Models for Effective Plastic Waste/ Dry Waste Management and Sustaining WASH / SWM Infrastructure - Identifying and Addressing O & M Challenges of ULBs

Research Study

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Abbreviations

1. **SBM – Swachh Bharat Mission**
2. **DAY-NULM – Deendayal Antyodaya Yojana -National Urban Livelihood Mission**
3. **SHG- Self-help groups**
4. **GoI – Government of India**
5. **SWM- Solid waste management**
6. **MRF – Material recovery facility**
7. **ULB – Urban Local Body**
8. **GVP – Garbage Vulnerable Point**
9. **NGO – Non-Government Organization**
10. **CT – Community toilet**
11. **PT – Public toilet**
12. **APMC – Agriculture Produce market committee**
13. **HH – Households**
14. **WP – Wastepicker**

Preface

The smaller cities of Maharashtra, the B and C class Councils struggle to manage the challenges associated with solid waste management. One of the gaps, mentioned by the Maharashtra Pollution Control Boards Annual Report 2021 is a lack of personnel to operate waste processing facilities. These ULBs generate 2367 Metric Ton waste per day currently with the quantity increasing steadily with increased urbanization.

At the other end, the same ULBs have failed to identify the wastepickers within their ULB. In the three divisions of Pune, Kokan and Nashik within the Class B and C ULBs with a total population of over 40 lakhs only 1241 wastepickers were identified. A Waste picker means a person or groups of persons informally engaged in collection and recovery of reusable and recyclable solid waste from the source of waste generation to earn their livelihood. In the current scenario waste pickers hold immense local intelligence being an active part of the recycling chain. Waste pickers have grown from being at 1st level of value chain i.e., being involved in collection of waste to being at 3rd level of value chain i.e., preprocessing and aggregators level. Integrating the wastepickers into the mainstream waste management services of the ULBs is critical to meet the waste management challenges of the ULBs as well as provide a dignified livelihood option to the wastepickers.

Under such circumstances, a holistic analysis was required to identifying the challenges faced by the ULBs to identifying the wastepickers and integrate them in the waste management services. This study thus aimed at defining **business models for sustainable waste management** through effective **integration of waste pickers/SHGs** with focus on Class B and C ULBs in Maharashtra.

The study was conducted by analysing data regarding waste management and wastepicker integration of 106 ULBs from the three divisions of Pune, Nashik and Konkan. The data analysis and discussion with ULB staff showed a gap in waste processing due to a lack of segregation and human resource unavailability. Simultaneously, desk research was conducted of successful wastepicker integration models along with an understanding of the national level programs such as NULM and SBM that emphasize the convergence of the schemes to integrate wastepickers and Self Help Groups into waste management. Based on analysis nine ULBs were selected where certain attempts for wastepicker or SHG integration has been made.

In the second phase the focus was to identify the parameters that hamper and facilitate the integration of wastepickers in the nine ULBs through field visits and primary data collection. The visits also studied the socio-economic conditions of the ULBs and the existing waste recycling market in the ULBs. Following the data collection, holistic and micro-level analysis was done. After analysis, the study has developed a matrix of twelve modules for wastepicker and SHG integration based on the economic conditions of the ULBs. A toolkit for identification and survey of wastepickers along with probable institutional frameworks for their integration have been recommended.

Acknowledgement

I take this opportunity to put on record our deep appreciation for the Ministry of Housing & Urban Affairs (MoHUA), Government of India (GoI) for providing us an opportunity to working on this study.

I also take this opportunity to express my gratitude towards Shri. Ranjit Chavan, President, All India Institute of Local Self Government for providing valuable guidance and support to complete this report. I also express my sincere thanks to Dr. Jairaj Phatak, IAS (Retd.), Director General, All India Institute of Local Self Government for his continued support in completing this report.

This Research Study was undertaken by Ms. Zigisha Mhaskar, Director, Kushaagra Innovations Foundation (KIF) & team. I truly appreciate the sincere efforts of the Chief Officers and SWM staff of Lonavala, Rahuri, Kagal, Khopoli, Vita, Sinner and Sangamner for extending their support and inputs during the study.

I am thankful to the RCUES's Research team for their continued support in completion of this research study report.

Director
RCUES, AIILSG, Mumbai

Chapter 1- Introduction

1.1 Project Background and scope

The SWM Rules 2016 state that it is the responsibility of ULBs to establish a system to recognize organizations of wastepickers or informal waste collectors and promote and establish a system for the integration of wastepickers. It also emphasizes on facilitating formation of self-help groups, providing identity cards and thereafter encouraging integration in solid waste management.

The National Urban Livelihoods Mission aims to reduce poverty and vulnerability of the urban poor households by enabling them to access gainful self-employment and skilled wage employment opportunities, resulting in an appreciable improvement in their livelihoods on a sustainable basis, through building strong grassroots level institutions of the poor and ultimately linking them to the entrepreneurial and the start-up revolution of India.

These two missions need to be seen in cognizance to understand that SBM defines the opportunity for wastepickers whereas the NULM defines the structure to utilize this opportunity.

Photo 1: Dry waste sorting area within landfill premise_Lonavala

Along with sustainable waste management practices this model is also based on the principles of inclusive development, livelihood enhancement and social benefits for the economically backward class of the society.

Creating sustainable businesses for various streams of waste is essential for ULBs to be able to manage their complete value chain of waste management. At the same time identifying the real wastepickers and integrating them in the formal waste management system is also essential. This research project focused on bridging this gap by exploring business models and opportunities of entrepreneurship for wastepickers and SHGs to support the waste management scenario for these cities.

Aim: To define business models for sustainable waste management through effective integration of wastepickers/SHGs with focus on Class B and C ULBs in Maharashtra.

Objectives:

1. To understand the challenges in identifying and organizing the wastepickers; and opportunities for integration of wastepickers in smaller ULBs.
2. To study the existing models of waste management and the market linkages in terms of circular economy.
3. To propose models with business plans for engagement of organized wastepickers for sustainable waste management practices.

1.1.1 Approach and Methodology of the study: The purpose of the research was to propose viable models, and thus the approach was based on an iterative process of studying the existing models, analysing the various parameters impacting the models, establishing dialogue with various stakeholders in the value chain, identifying the capacity, knowledge, institutional gaps; creating business models and assessing its applicability.

1. Study of existing models – The existing state and central government programs and guidelines were studied and case studies at national level were analysed. An overview of the current scenario of wastepickers and waste management in the three divisions – Nashik, Konkan and Pune of Maharashtra was reviewed.

2. Site visit to six ULBs and analysis of findings – Based on the division level overview, six ULBs were selected which showcased examples of integration of wastepickers or potential for integration of SHG/ wastepickers in SWM operations.

3. Designing models – The analysis showed that several factors influenced the business models that would be suitable for each ULB. A matrix of these options was proposed to be created.

1.2 Current scenario

Definition of waste picker as per solid waste management rules 2016 – Waste picker means a person or groups of persons informally engaged in collection and recovery of reusable and recyclable solid waste from the source of waste generation the streets, bins, material recovery facilities, processing and waste disposal facilities for sale to recyclers directly or through intermediaries to earn their livelihood.
Informal waste collector includes individuals, associations or waste traders who are involved in sorting, sale and purchase of recyclable materials.

In the current scenario wastepickers hold immense local intelligence being an active part of the recycling chain. Wastepickers have grown from being at 1st level of value chain i.e., being involved in collection of waste to being at 3rd level of value chain i.e., pre processing and aggregators level.

1.2.1 Waste picker integration works on following three pillars

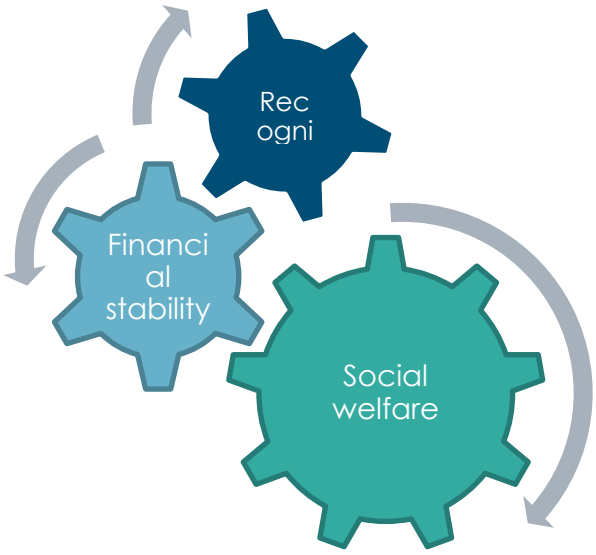


Figure 1: Three pillars for waste picker integration

A. Recognition – The group of wastepickers needs to recognized and made a part of system

B. Financial Stability – Coming from a financially weaker section, sustainability is directly proportional to the financial stability and win-win scenario for wastepickers

C. Social welfare – There have been various government schemes for vulnerable groups which can be anchor for sustaining model

Five well known case studies from across India are mentioned here to highlight their unique model and to understand the parameters that contribute towards integration of wastepickers in the true essence. The highlights from case studies of SWaCH Cooperative, Pune; Hasirudala, Bangalore; Indore Municipal Corporation; Stree Mukti Sanghatana; and Ambikapur Municipal Corporation are given in the annexure 3

1.2.2. Status of Waste Picker integration in Nashik, Konkan and Pune divisions for B&C category ULBs

The current urban population for Class B & C ULBs is **40,37,307 in all** 3 divisions, and total number of waste picker's **1241**. Except for newly formed ULBs about 99% of B & C class ULBs across 3 divisions have conducted a wastepickers survey and identified wastepickers.

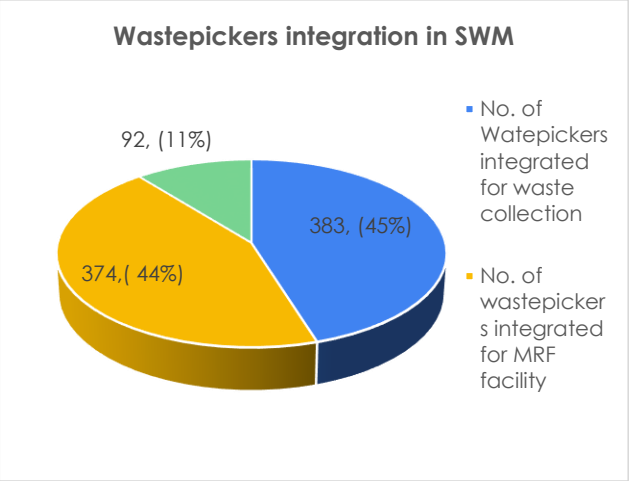
Division	No of ULBs	No. of wastepickers identified	No. of WPs integrated	(WPs identification) average per ULB	WPs integration*
Konkan	20	125	61	6	48.8%
Nashik	39	504	202	13	40.1%
Pune	47	612	473	13	77.3%
Grand Total	106	1241	736	12	59.3%

Table 1: Division wise number of identified waste picker

**WPs Integration – means wastepickers are involved by the ULB in either door to door collection, MRF waste segregation or employed in some waste management activity.*

Wastepickers integration: The review of 106 ULB showed 3 or 4 major work areas used for wastepicker and SHG integration. The methods used for integration were also reviewed.

Figure 1: Wastepicker integration in SWM



Graph 1:Waste picker integration in SWM

45% of ULB have integrated wastepickers as a helper on waste collection vehicles. Some of them on daily wages basis but mostly WPs are not paid they have been given the right on collecting scraps.
44% Wastepickers integrated on MRF Centers for secondary segregation of dry waste, through contactor or by ULB.
11% were as composting project manpower requirement is comparatively less hence it has less scope for integration of

From the baseline study across 3 divisions, there are about 67 ULBs that have integrated wastepickers into the waste management systems.

Photo 2: Waste picker sorting at landfill

Modes of Integration:

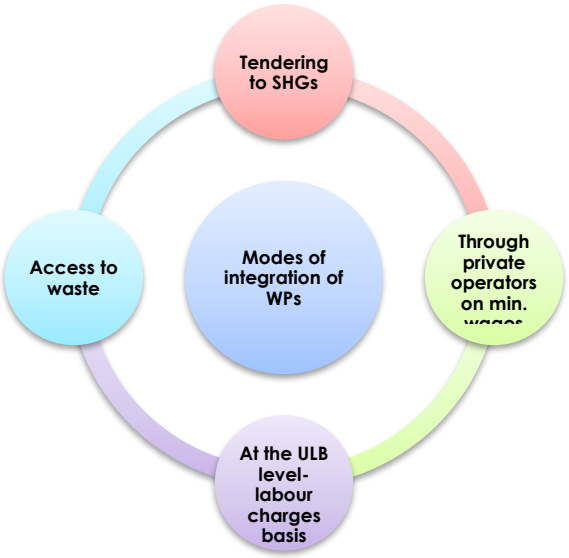


Figure 2 Modes of integration of wastepickers

Mode of Integration:

- Tendering to SHGs:

SHG were formed of wastepickers through which they are participating in tendering process to get some work.

- On Pay roll by contractor:

Contractor who operates MRF have integrated wastepickers for secondary sorting of dry waste.

- Labor charges/Min. wages basis:

ULB have integrated some wastepickers where ULB have their own collection and operation of processing system

The best cases within the 3 division of waste picker and SHG integration studied were:

A. Integration of wastepickers for Awareness activities- Mahabaleshwar
B. Integration of wastepickers on waste collection System - Shirur
C. Integration of wastepickers & SHGs for operating MRF facility – Khopoli, Lonawala and Vita
D. Integration of wastepickers & SHGs for septage management – Sinner and Wai
E. Integration of Wastepickers for waste management of activities - Satara

1.2.3. Situational Analysis of Six shortlisted ULBs

The six ULBs were selected based on the status that they have identified and engaged wastepickers for waste management. An analytical framework was created to study all six ULBs on various parameters linked to the engagement of wastepickers in waste management. The intent was to identify good practices, challenges, ULB experiences for the engagement and integration of wastepickers and self-help groups and the market for recycling. The ULBs studied were

1. Lonavala
2. Wai
3. Kagal
4. Sangamner
5. Rahuri
6. Khopoli

The following parameters were examined for each ULB.

1	Solid waste management scenario - a. Overall waste management value chain
2	Wastepickers status a. Method for wastepicker identification b. Formalization of wastepicker c. Mode of integration d. Daily average income e. Working environment f. Inclusion in social welfare schemes
3	Status of NULM a. No. of SHGs b. SHGs working for any SBM-related activities c. Is there any SHG formed for wastepickers? d. The willingness of NULM to form SHG e. Inclusion in any social welfare schemes
4.	Market study a. No. of scrap shops b. Type of material accepted at scrap shops c. Quantum and type of scrap dealt with d. Availability of forward linkages

1.3 Gap Analysis

The study has highlighted the need to understand the current implementation of the convergence program for DAY-NULM and SBM from the point of view of impact on effectiveness and efficiency of the functions for waste management value chain as well as benefits to the waste picker community. Discussion with ULB officials and staff and data analysis shows that there is a gap in waste processing due to a lack of segregation and human resource unavailability. This can be bridged by integrating wastepickers for handling and processing of the waste. This also provides a scope for income sources for the Wastepickers. However, the significant point is whether waste picker or SHGs find the options provided financially lucrative and viable.

Currently the models explored for waste picker and SHG integration are limited. Based on the visits and study of the six ULBs it was realized that there are several factors that facilitate as well as hamper the integration of the wastepickers. The factors that hamper and facilitate integration were studied for three groups – wastepickers, Women SHGs and waste picker SHGs (this has been a method suggested by NULM for integration).

Group	Factors hampering the integration	Factor facilitating the integration
Wastepickers	• Low Identification of wastepickers • Limited work opportunities available to integrate wastepickers • Inconducive working environment • Inadequate income from the activities • No provision of other benefits	• Availability of Organization/ NGO for facilitation • The higher number of wastepickers identified • The market for recycling in the city
Women SHGs	• Socio-cultural factors • Current functioning of SHGs	• Strong leadership and motivated SHGs • ULB identification of activities for SHG integration
Waste picker SHGs	• Willingness of wastepickers: • Opportunities for sustaining the SHGs	• Wastepickers database and willingness of ULB

Table 2: Factors facilitating and hampering the integration

1.3.1 Key gaps

- ULB officials need clarity about how to identify, survey and integrate the wastepickers as there are no government guidelines available. All ULB officials stated they would like to conduct the activity but the priority for it was always low and there were no clear directions on how to implement the same.
- Financial modelling is required to work out the basic earning capability for a waste picker for maintaining the incentive to work in waste and to sustain them.
- The conditions of working on the MRF or waste processing sites are very unhygienic and thus wastepickers may not be inclined to work here, unless they get good scrap from the place.
- Payments from contractors to laborers depend on ULB payments, delays in payment are a common occurrence leading to unstable employment for the wastepickers.
- Wastepickers in these ULBs do not see a definite advantage in getting themselves surveyed or integrated, thus they do not come forward on their own for the same.
- ULBs have to identify and take active measures to involve SHGs in waste management
- SHG involvement requires sustained income-generating opportunities to keep them motivated.
- The NULM program needs to provide support for the formation of SHGs for the wastepickers and sustaining them.
- As mentioned above, one of the factors that hamper the integration of wastepickers is a lack of organization of wastepickers. SHGs can form a platform for organizing wastepickers to integrate them into formal waste management activities.

To address these gaps the study concludes by providing the following guidelines in the following report:

1. Toolkit for wastepickers survey

2. Guidelines for integration of wastepickers and SHGs

3. Policy recommendations for state level interventions.

4. Potential funding sources for ULBs for waste picker integration.

Chapter 2- Tool Kit for Waste picker Survey

2.1 Guidelines for Wastepickers survey

Integration of wastepickers in solid waste management is an important topic under the Solid Waste Management Rules 2016 and the Swachh Bharat Mission. But it was observed that small towns and municipal councils find it challenging to integrate the wastepickers due to a lack of guidance for survey and integration opportunities for the wastepickers and the unavailability of an adequate system to facilitate the integration properly.

There are 3 parameters which affect the integration of waste pickers from the city perspective

Figure 3: Important factors for integration of waste pickers from city's' perspective

Hence, to simplify the procedure for the identification and integration of wastepickers we have studied various modes across the country, and herewith trying to propose how we can efficiently integrate the wastepickers through this action plan.

2.2 Steps to conduct a survey of Wastepickers

There are 3 important steps for conducting a survey of wastepickers:

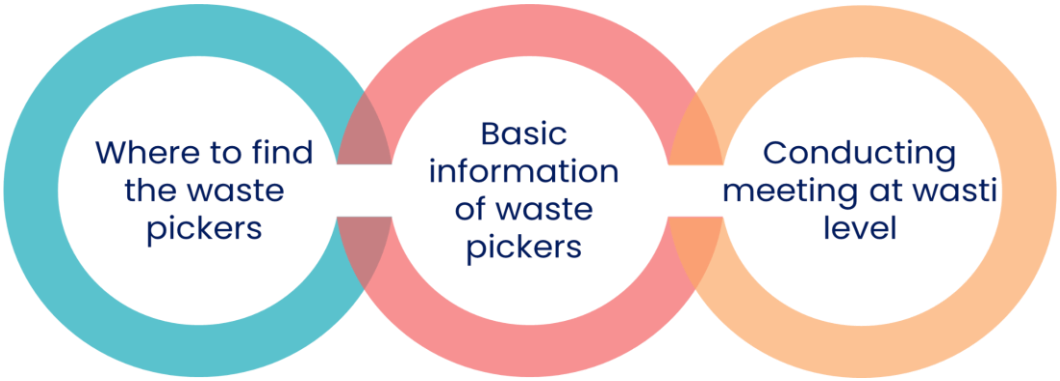


Figure 4: Steps to conduct waste picker survey

A. Where to find the wastepickers

- To identify the wastepickers, first find the major sources of waste generation in your city i. e. hotels, shops, commercial establishments, etc
- Along with this, there are some places where garbage accumulates in cities i. e. GVPs and dumping grounds.
- Scrap shops near your city and surrounding areas

B. Basic information on wastepickers

For the preliminary survey, groups should be formed with the help of municipal council employees, local NGOs, and self-help groups in the city or a survey agency can be hired for the same. Groups of 2-2 should visit the wastepickers and ask them basic information like the name of the garbage collector, other members of the family who work as garbage collectors, approximate age, and place of residence.

Place of survey	**Wastepickers name**	**M/F**	**Age**	**Other family members working as wastepickers (number of MMs)**	**Address/ vasti name**

Table 3: Format for ULB level waste picker survey form

C. Conducting meetings at wasti level:

After receiving the preliminary information, groups of 5-5 should be formed with the help of municipal council staff, NGOs and self-help groups.

These groups should visit the wastepickers at their homes and interact with them, understand their problems related to work, and tell them about the importance of formation of self-help groups and how they can work for their economic empowerment. The below survey form should be filled for each wastepicker.

Address/ Wasti name	Wastepickers name	Age	Place of work/waste picking	Approx. income (per day)	Issues faced

Table 4: Format for individual waste picker survey form

These groups should go to the wasti level at least twice a month to interact with the wastepickers and encourage them to form self-help groups. During the first few interactions the officials need to gauge the willingness of the wastepickers to engage with the ULB into formal waste management systems. Survey form is attached as part of ***Annexure – 1***.

2.3 Integration of wastepickers

After surveying/identifying the wastepickers the following should be done to integrate them in waste management activities:

A. Issuance of work identity card to wastepickers

B. Communicating the importance of integration - assurance of sustainable financial income, provision of necessary protective equipment for waste collection

C. To provide health facilities

D. Incorporating a self-help group/volunteer organization and providing employment to wastepickers through it.

Figure 5: Process components for wastepicker integration

A. Issuance of work identity cards to wastepickers

The first step after the survey is the issuing of identity cards by the municipality to the surveyed wastepickers. This will help the wastepickers to maintain their right to waste. The identity card should include the following:

Name of ULB:

Photo

Wastepickers Name:
Age:
Gender: M/F
Address:
Current type of work: Garbage picking across the city/ pick up at the depot
Experience: ____ years

Figure 6: Sample ID card for wastepickers

B. Communicating the importance of inclusion to wastepickers

An identity card issued by the municipal council will be required for wastepickers for integrating them into the solid waste management system as well as for access to other health facilities.
A meeting should be held with the wastepickers after giving them identity cards. In this meeting, they should be informed about the importance of inclusion, guarantee of sustainable economic income through inclusion, provision of necessary protective equipment for waste collection, and help in raising their standard of living.
This meeting should be chaired by the Chief officer as an administrator of the municipality and it should include the Health Department, NULM officers, and active representatives of self-help groups.

C. To provide health facilities

Conducting health camps for wastepickers along with creating awareness on inculcating good health habits, the importance of physical hygiene, etc. should be provided.

Providing information about available government schemes. and helping them to avail the benefit of the schemes. Enrolling them into schemes such as Ayshuman Bharat.

D. Incorporating a self-help group/volunteer organization and providing employment to wastepickers through it.

Incorporation of waste collectors can be done in 2 ways:

1. Incorporation of wastepickers through NGO
2. Establishing self-help groups of wastepickers

1. **Incorporation of wastepickers through NGO:**

   B and C municipal councils, as well as Nagar Panchayats, do not usually have independent NGOs working for the wastepickers. But if there are such organizations, the membership of these organizations can be given to wastepickers and the waste management-related work can be given to such cooperative organizations having a minimum (60%) membership of wastepickers (in this it will be mandatory to include only wastepickers surveyed through the municipal council).

2. **Establishing self-help groups of wastepickers:**

   Self-help groups of wastepickers can be formed in municipal councils where NGOs are not available. It involves taking together the surveyed wastepickers and forming a self-help group through NULM, the health department, and engaging active citizen groups who are working for the working class for making awareness in the wastepickers regarding the importance of self-help groups.

2.4 Financial Sustainability for the wastepickers

The two important things to note:

1. Identifying the work related to solid waste management: What kind of work can be allotted to wastepickers to ensure their sustainable income source
2. Means of giving work: Provision for giving some work through self-help groups/organizations of wastepickers.

List of solid waste management related work:	
Solid waste collection	For solid waste collection employed as a helper for waste segregation on the municipal council vehicle.
Centralized processing plant	Operation of composting/biogas plant and MRF Center
MRF (Management of Dry Waste)	Sorting and recycling of dry waste at MRF Plant
Road sweeping	Municipal council to carry out the work of road sweeping on contract basis through the SHGs of wastepickers

Table 5: Opportunities for wastepickers in solid waste management

(Note: If any work can't be given to a self-help group due to any technical difficulties and has to be done through a contractor, then provision should be made in the contract documents for the contractor to employ wastepickers.)

photo 3: Dry waste sorting_Rahuri

Chapter 3- Guidelines for Integration of Wastepickers and SHGs

3.1 Business modules for integration

After understanding the parameters about the solid waste management status, wastepicker status, the socio-economic status of the towns and the waste market of various ULBs, potential business modules for SHGs and wastepickers integration have been designed.

Considering SBM and NULM convergence and SWM 2016 rules as a base for the integration herewith enlisting the possible business modules for ULBs

Areas for integration of wastepickers and women SHGs:

Sr. No	Areas	Applicable for SHGs/ Wastepickers
1	Operation of centralized MRF and optimizing quantity of recyclables	**Wastepickers and/or SHGs**
2	Operation of centralized processing plant (composting and/or biogas)	
3	Running 3R collection center- collection of reusables	
4	Running E-Waste collection center	
5	Upcycled products from Plastic/ cloths	
6	Operation of FSTP Plant and revenue generation from selling manure	
7	Street sweeping contract of ULB	**SHGs**
8	Awareness for source segregation & waste reduction at source	
9	Monitoring of CT/PTs cleaning	
10	Vermi-composting for agricultural waste/APMC Market waste and income generation from compost selling	
11	Operation of decentralized Composting/ Biogas Plant for properties with on -site composting, such as hotels, hospitals or institutes and selling of compost/ biogas for revenue generation	
12	Street sweeping+ maintaining the cleanliness on major road of the city	

Table 6: Areas of integration for wastepickers and women SHGs

3.2 Selection of appropriate model

Applicability: Selection of appropriate model for each ULB shall depend on the areas of improvement required for to achieve sustainable waste management in the city. Additionally the two factors to be considered while selecting a model are:

1. Population of the city
2. The current economic activities in the city – the modules can be bifurcated as given below.

Type of city		
Agricultural	**Tourism**	**Industrial/ small scale businesses**
Operation of centralized processing plant (composting and/or biogas)	Operation of centralized processing plant (composting and/or biogas)	Operation of centralized processing plant (composting and/or biogas)
Operation of centralized MRF and optimizing quantity of recyclables	Operation of centralized MRF and optimizing quantity of recyclables	Operation of centralized MRF and optimizing quantity of recyclables
Awareness for source segregation & waste reduction at source	Awareness for source segregation & waste reduction at source	Awareness for source segregation & waste reduction at source
Monitoring of CT/PTs cleaning	Monitoring of CT/PTs cleaning	Monitoring of CT/PTs cleaning
Operation of FSTP Plant and revenue generation from selling manure	Operation of FSTP Plant and revenue generation from selling manure	Operation of FSTP Plant and revenue generation from selling manure
Street sweeping contract of ULB	Street sweeping+ maintaining the cleanliness on major road of the city	Street sweeping contract of ULB
Vermi-composting for agricultural waste and income generation from compost selling	Operation of decentralized Composting/ Biogas Plant for properties with on -site composting, such as hotels, hospitals or institutes and selling of compost/ biogas for revenue generation	Running 3R collection center- collection of reusables
Running 3R collection center- collection of reusables	Running 3R collection center- collection of reusables	Running E-Waste collection center

Type of city		
Agricultural	**Tourism**	**Industrial/ small scale businesses**
Running E-Waste collection center	Running E-Waste collection center	Upcycled products from Plastic/ cloths
Upcycled products from Plastic/ cloths	Upcycled products from Plastic/ cloths	

Table 7: List of opportunities of integration of wastepickers and SHGs based on economy of the city

(Note: colour code indicates following)

	Common for all class of ULBs (NPs, Class A, B and C)
	Specific for type of city (Agriculture/ tourism/industrial economy)
	Depends on population and on-field requirements of the city

3.3 Financial parameters for selection of appropriate model

To assist the ULB officials in making a decision a matrix is developed considering the type of city, the requirement of human resources, the role of ULB, and the mode of engagement of SHGs/wastepickers.

Assumptions considered for financial estimations:
Following are the assumptions considered while defining the matrix:

- Wastepickers will be organised into SHG groups to engage with the ULBs. Thus, models developed consider SHG to be considered as SHG of wastepickers or women.

- For the operation of the centralized processing system capital investment is to be borne by ULB which will include land, infrastructure, and required machinery.

  The centralized processing system includes- Operation of composting/ Biogas Plant, MRF and the operation of the FSTP plant.

  - For road sweeping the tender needs to be floated with preference to the SHGs working in waste management work.
  - For the Plastic upcycling center, 3R center, and E-Waste management center cost of land and capital investment should be borne by the ULB if SHGs are not capable of the capital investment.

  In that case, 2 types of contracts can be possible:
  1. SHG needs to share their profits with ULB on monthly basis, operational cost to be borne by the SHGs

2. ULB can appoint SHG members on a salary basis for the operation of the plant (Labour contract), all capital investment and operational expenses will be borne by the ULB

Monitoring of CT/PT will be on an honorarium basis, a separate agency/ or ULB staff shall provide the cleaning services. ULB needs to identify and recognize women SHGs, willing to undertake this tasks voluntarily. To gauge the willingness of the women SHGs formed under NULM in cities, ULB should conduct a willingness survey of the SHGs. A form for the same is attached as **Annexure 2**.

Photo 4: Composting facility Kagal

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	Table 8 : Matrix for selection of appropriate model based on financial estimates								
	Areas/modules of integration	**Economy of city**	**Role of Wastepicker and SHGs**	**Support required from ULBs**	**Workers required**	**Type of contract**	**Full time/Part time**	**Estimated profit Per Ton in INR**	
								For ULB	**For workers**
1.	**Operation of centralized MRF and optimizing quantity of recyclables**	Agriculture/ tourism/industrial economy	Operation and supervision of MRF, establishing forward linkages, record keeping and monthly reporting to ULB	Infrastructure-MRF facility, covered sorting space, compartments for storage of recyclables, electricity for operation of machines, weighing scale etc	1 worker per 500-600kg	ULB can have a labour contract or profit sharing contract with SHG	Full time	20K	15k-20k
2.	**Operation of centralized processing plant (compost+ biogas) and optimizing quality and quantity of city compost**	Agriculture/ tourism/industrial economy	Operation and supervision of MRF, establishing forward linkages, record keeping and monthly reporting to ULB	Infrastructure- Pit/windrow/biogas plant, Shredder- for wet waste, ensuring segregated wet waste coming at processing site	Up to 2 ton require 2 workers, 1 worker for every additional 2 ton above	ULB can give labour contract or profit sharing contract with SHG	full time	5K	15k-20k

	Areas/modules of integration	**Economy of city**	**Role of Wastepicker and SHGs**	**Support required from ULBs**	**Workers required**	**Type of contract**	**Full time/Part time**	**Estimated profit Per Ton in INR**	
								For ULB	**For workers**
3.	**Awareness for source segregation & waste reduction at source**	Agriculture/ tourism/industrial economy	Creating awareness in every household on a daily basis, conducting rallies and events to promote awareness. Monthly reporting to ULB and meeting with concern department of ULB	Preference for appointment of SHGs through tendering and relaxation of financial conditions for SHGs	1 per 1000 HHs	ULB can give labour contract or profit sharing contract with SHG	Part time	as per the contract	as per the contract
4.	**Monitoring of CT/PTs**	Agriculture/ tourism/industrial economy	On honorarium basis maintaining record of cleanliness of CT/PTs and providing report to Health department, Authority for conducting training and meeting with safai workers.	Identify and recognize such volunteering women in SHGs, Legal MoU and announcement	1 person per 3-4 CT/PTs	ULB can give labour contract or profit sharing contract with SHG	Part time	NA	On honorarium basis

	Areas/modules of integration	**Economy of city**	**Role of Wastepicker and SHGs**	**Support required from ULBs**	**Workers required**	**Type of contract**	**Full time/Part time**	**Estimated profit Per Ton in INR**	
								For ULB	**For workers**
5.	**Operation of FSTP Plant and revenue generation from selling manure**	Agriculture/ tourism/industrial economy	Operation of FSTP plant, following and coordination for desludging schedule	Providing FSTP infrastructure, preference for appointment of SHGs through tendering and relaxation of conditions for SHGs, desludging mechanism	1 per 10 KLD	ULB can give labour contract or profit sharing contract with SHG	Part time	2000-5000	7800
6.	**Street sweeping contract of ULB**	Agriculture/ tourism/industrial economy	Providing PPE and basic equipment as per the tender document, deploying persons, establishing record keeping and feedback system. Monthly reporting to ULB and meeting with the concerned department of ULB	Preference for appointment of SHGs through tendering and relaxation of financial conditions for SHGs	Based on guidelines: Class of road Class A: at 750M Class B:100M	ULB can give labour contract or profit sharing contract with SHG	Full-time	NA	as per the contract

	Areas/modules of integration	Economy of city	Role of Wastepicker and SHGs	Support required from ULBs	Workers required	Type of contract	Full time/Part time	Estimated profit Per Ton in INR	
								For ULB	For workers
7.	**Street sweeping+ maintaining the cleanliness on the major road of the city**	Tourism	Providing PPE and basic equipment as per the tender document, deploying persons, establishing record keeping and feedback system. Monthly reporting to ULB and meeting with concerned department of ULB	Preference for appointment of SHGs through tendering and relaxation of financial conditions for SHGs	1 per 1000m patch of main roads	ULB can give labour contract or profit sharing contract with SHG	Fulltime	NA	as per the contract
8.	**Running 3R collection center- collection of reusables**	Agriculture/ tourism/industrial economy	Establishment and operation cost to be borne by SHG, Proving green certification and monthly reporting	Providing Land/Shed for 3R collection center, permission to collect reusable material from doorstep/given location	1 per 1000-3000HHs (depend on class of ULBs) + 2 for central operations	ULB can give labour contract or profit sharing contract with SHG	Full time	NA	15k-20k
9.	**Running E-Waste collection center**	Agriculture/ tourism/industrial economy	Establishment and operation cost to be borne by SHG, providing green certification and monthly reporting	Providing Land/Shed for E-waste collection center, permission to collect E-waste from doorstep/given location	1 per 1000-3000HHs (depend on class of ULBs) + 2 for central operations	ULB can give labour contract or profit sharing contract with SHG	Full time	NA	10k

	Areas/modules of integration	Economy of city	Role of Wastepicker and SHGs	Support required from ULBs	Workers required	Type of contract	Full time/Part time	Estimated profit Per Ton in INR	
								ULB	workers
10.	**Upcycled products from Plastic/ cloths**	Agriculture/ tourism/industrial economy	Establishment and operation cost to be borne by SHG, providing green certification and monthly reporting.	Providing Land/Shed at waste processing site for establishing plastic upcycling center, access to plastic collected by ULB through daily collection.	Per 500-600kg/ one worker+ 1 manager	ULB can give labour contract or profit sharing contract with SHG	Full time	50K	15k-20k
11.	**Vermi-composting for agricultural waste/APMC Market waste and income generation from compost selling**	Agriculture	Establishment and operation cost to be borne by Farmer/ APMC market	Creating awareness in citizens, involvement of NULM for arranging required training to wastepickers or SHGs, support for marketing of vermicompost with city compost	1 per 500kg/1 TPD plant	Direct contract with SHG/ WastepickerSHG with the pvt entity.	Part time	NA	6k/ton
12.	**Operation of decentralized Composting/ Biogas Plant for on -site composting, at hotels, hospitals or institutes and selling of compost/ biogas for revenue generation**	Tourism	Establishment and operation cost to be borne by On site property owner/individual/ Hotel etc.	Helping for awareness in citizens through social media and other platforms, involvement of NULM for arranging required training, support for marketing of vermicompost with city compost	1 per 3 to 4 decentralized plants	Direct contract with SHG/ WastepickerSHG with the pvt entity.	Part time	NA	10K/ton

Table 8:Matrix for opportunity finalization

Table 9: (Detailed estimated budgets and incomes from the modules)

Operation of centralized MRF Facility				
Population Range	**upto 10k**	**upto 25k**	**upto 50k**	**50k-1 lac**
Population	5000	25000	50000	100000
Waste generation (TPD)	2	10	20	40
Dry wate (TPD)	1	5	10	20
Type of MRF facility	Manual MRF	Manual MRF	Manual MRF	Semi-Automatic
Workers req. to operate the MRF	2	8	17	33
Area Requirement (sq.ft.) This area includes basic infrastructure	250	1250	2500	5000
Indicative Capital Investment (excluding cost of land) (Rs.)	300000	1500000	3000000	3500000
Operation Cost (includes honorarium/ salary and regular repair, maintenance cost and consumables) (Rs.)	200000	750000	1500000	2500000
Approx. earning (per month) for ULB (excluding operational cost + salary) (Rs.)	24333	121667	243333	486667
Operation of centralized Composting				
Population Range	**upto 10k**	**upto 25k**	**upto 50k**	**50k-1 lac**
Population	5000	25000	50000	100000
Waste generation (TPD)	2	10	20	40
Wet waste Generation (TPD)	1	5	10	20
Type of composting method	Pit composting	Pit/ windrow	windrow	windrow
Workers req. to operate plant	2	3	5	9
Area requirement (sq.m.)	500	2500	5000	10000
Indicative Capital Investment (excluding cost of land) (Rs.)	500000	2500000	5000000	10000000
Operation Cost (includes honorarium/ salary and regular repair, maintenance cost and consumables) (Rs.)	220000	950000	1870000	3710000
Approx. earning (per month) for ULB after 45 days from sale of compost/biogas. (Rs.)	17500	87500	175000	350000
Awareness for source segregation				
Class of city	**upto 5k**	**upto 25k**	**upto 50k**	**50k-1 lac**
Current Population	5000	25,000	50,000	100000
Type of city	any	any	any	any
No of HHs	1250	6250	12500	25000
Workforce requirement	2	7	13	25
Operational cost (Rs)	420000	1020000	1740000	3180000

Operation of FSTP Plant and revenue generation from selling manure				
Class of city	**Up to 5k**	**Up to 25k**	**Up to 50k**	**50k-1 lac**
Current Population	5000	25,000	50,000	100000
Plant Capacity (KLD)	2.25	11.25	22.5	45
Income per KLD/month(Rs)-50 Rs/day	2813	14063	28125	56250
Running E-waste collection center- collection of reusables				
ULB Class	**up to 10k**	**Up to 25k**	**Up to 50k**	**50k-1 lac**
Population of ULB	5,000	25,000	50,000	100,000
No. of HHs	1250	6250	12500	25000
Per capita E-waste/year (kg)	2.40	2.40	2.40	2.40
Waste generation (per month in Ton)	1	5	10	20
Considering 60% collection	0.60	3.00	6.00	12.00
Staff requirement	**1**	**4**	**6**	**10**
E-waste collection	1	2	4	8
Operation of E-waste center	0	2	2	2
Expenditure (Excluding transportation)	**230250**	**1083917**	**2163833**	**4323667**
Capital investment (Excluding cost of land)(Rs.)	200000	1000000	2000000	4000000
Space requirement (sq. ft.)	250	750	1500	3000
Miscellaneous (Instruments+ infra) (Rs.)	25000	75000	150000	300000
PPE (Rs.)	5000	8167	12333	20667
Transportation (Monthly) (considering 12 trips/month by each worker) (Rs.)	9600	39200	59200	99200
Income	**2400**	**20800**	**60800**	**140800**
Selling of E-waste (Rs/kg)	20	20	20	20
Quantity of E-waste (kg) considering 60% collection	600	3000	6000	12000
Income per month (Rs.)	12000	60000	120000	240000
Net profit (per Month) (Rs.)	2400	20800	60800	140800

Decentralized Composting	
No. of operators	**1**
Total wet waste (kg)	**500**
Capital investment (Rs.)	**39,500**
Manual screening (Rs.)	35,000
Cost of pit/drum/HDPE bed(Rs.)	4500
Operational cost (per year) (Rs.)	**161500**
Culture (per year) (Rs.)	3000
Packaging and other (Rs.)	10000
Transportation (2 trips) (per trip 1500) (Rs.)	144000
Compost (after 45 days) (kg) (Rs.)	**13500**
Annual income (considering 45 days cycle) (Rs.)	**162500**

Running 3R collection center- collection of re-usable				
Population slab	**Up to 10k**	**Up to 25k**	**Up to 50k**	**50k-1 lac**
Population of ULB	5,000	25,000	50,000	100,000
No. of HHs	1250	6250	12500	25000
Per HHs reusables(kg)	20.00	20.00	20.00	20.00
Reusable generation (per month in ton)	2	10	21	42
Considering 60% HHs participating per month Reusable collected (ton)	1	5	10	21
Staff requirement	**3**	**5**	**6**	**10**
Collection Drives	1	3	4	8
Operations of center (1 accounting+ 2 sorting)	2	2	2	2
Expenditure (Excluding transportation)	**30458**	**142000**	**276000**	**548000**
Capital investment (Excluding the cost of land)(Rs.)	200000	1000000	2000000	4000000
Space requirement (sq. ft)	250	750	1500	3000
Miscellaneous (Instruments+ infra) (Rs.)	25000	130208	260417	520833
PPE (Rs.)	5000	10000	12000	20000
Transportation (Monthly) (considering 12 trips/month by each worker) (Rs.)	9600	48000	57600	96000
Income	**6025**	**30125**	**98650**	**216500**
Selling of Reusables (Rs/kg)	15	15	15	15
Quantity of recyclables (kg) considering 60% collection	1042	5208	10417	20833
Income per month(Rs.)	15625	78125	156250	312500
Net profit (per Month) (Rs.)	6025	30125	98650	216500

Biogas	
No. of operators	1
Total wet waste/ Plant capacity (kg/day)	10
Capital Investment	120000
Operational cost per year (Rs)	1000
By-products (Per 10kg/month)	
Biogas generation per month (mt.cu.)	4050
Per meter cu. cost (Rs)	15
Slurry produced per month(lit)	80
Slurry sale price (Rs/lit)	100
Income per month	
Biogas sale per month	60750
Slurry sale per month	8000
Monthly User fee for waste processing (Rs 100/kg)	1000
Monthly income	69750

Vermi-composting for agricultural waste and income generation from compost selling			
Plant size	**No. of workers**	**Time investment**	**Monthly income from 3rd month (Rs.)**
1 TPD	**1**	**1 hr**	**23000**

Table 9:Financial understanding of the integration models suggested

Chapter 4- Policy Recommendations

4.1 Supporting policies

As is inferred from this study, ULBs find it challenging to integrate the wastepickers after their identification, as there are no guidelines or established systems for integration provided by the State or the Central government. This also results in lack of dedicated funds/ budgets earmarked for this activity, thus further constraining the ULBs.

Several cities and states have successfully integrated SHGs in waste management functions such as Kerala, Chattisgarh - Ambikapur, and Orissa. A few good examples exist even in Maharashtra such as Pune. To mainstream the SHG integration in SWM activities, dedicated programs and funds need to be made available. A few states in India have provided funding for wastepickers under different resolutions or programs.

Karnataka:

The state government of Karnataka took a decision to extend benefits enjoyed by state government employees to 13,133 pourakarmikas across the state. The 13,133 pourakarmikas will now be covered in the salary bracket of Rs 17,000 to Rs 29,950.[1] The State will directly pay the Pourkarmikas working within the different ULB of the state. The payment will be a direct transfer and thus the ULB does not have to bear the cost of engaging the wastepickers. This will encourage the ULBs to integrate wastepickers into the waste management systems.

Chattisgarh:

The town of Ambikapur paved the way by showcasing how SHGs can work in SWM and improve the waste management situation in the city. Based on this example, as stated by the Ambikapur Commissioner, the State government has declared to pay a renumeration to all SHG women working in waste management. The renumeration is Rs.6000 per SHG women working in waste. This reduces the burden on the ULB and they can directly engage the women in waste management activities.

Support from State for smaller ULBs in terms of guidelines and funding, forces the ULBs to implement measures and take efforts for waste picker integration.

[1] *Newindianexpress.com/states/karnataka/2022/sep/20/karnataka-13133-pourakarmikas-made-govt-staffers-2499985.html*

4. 2 Methods for ULBs to engage Wastepickers in projects.

For ULBs to involve the wastepickers into projects, they require an organisation to have a formal contract with. ULBs cannot provide work individually. Thus, the two means of organizing wastepickers is:

a. Creating a union or cooperative of the wastepicker's under the facilitation of a social cause organisation.
b. Forming a self-help groups of the wastepickers.

a. **Formation of a cooperative of wastepickers** - The steps suggested
    i. ULB to float a EOI requesting interested NGOs, Civil society organisations interested in working with Wastepickers to submit their interests in forming a cooperative of the wastepickers in the ULB.
    ii. Based on suitability criteria such as: area of work, local presence, previous experience of working with wastepickers or in solid waste management, willingness to work for the upliftment of wastepickers, ULB can select a facilitating organisation.
    iii. ULB provides the following support to the cooperative:
        1. Monthly funding for the administrative functioning of organisation of the cooperative. ULB can decide this based on the number of wastepickers.
        2. Space for setting up of a office for the cooperative
        3. Personal safety equipment for the wastepickers per year
        4. Health and life insurance to the wastepickers
    iv. Engage the Cooperative in any of the suggested income generating/ livelihood activities through a MOU.

b. **Forming a self-help groups of the wastepickers.** -

The report, "Empowering Marginalised groups – Convergence between SBM and DAY – NULM" published by GoI in 2018, addresses the overlap in schemes and modes for integration of wastepickers in formal systems. It suggests, empowering the waste picker groups through the following: a. Skill Training b. SHG Formation c. Financial Inclusion d. Capacity building

For successful SHG formation of wastepickers, it will require an organisational structure to be created. A federation of wastepickers SHGs can lend support to individual ULB level SHGs. To create such a federation of wastepicker SHG at the state level, each ULB should be mandated to form a SHG of wastepickers at their local level.

Under DAY-NULM states that Self Help Groups (SHGs) and their federations are to be formed and mentored under DAY-NULM in order to enable urban poor communities to help themselves out of poverty and towards sustainable income generating livelihoods.

The steps suggested:

i. The ULB through its social service department, to form a SHGs of the wastepickers identified. These can be mix SHGs of men and women as identified.

Ii. The wastepicker SHGs to be linked to the district level wastepicker SHG federation structure.

Ii. SHGs to be integrated into SWM livelihood options, as suitable for the ULB. ULB signs an MOU with the SHG.

Iii. The federation with support from the ULB trains the wastepickers in the livelihood activities

Iv. The wastepicker SHG has to be engaged by the ULB in SWM activities.

Iv. The fund for the PPE, capacity building, scholarships for children, health insurance etc, to be funded through the federation. The state supports the federation and its secretariat to provide these services to the wastepickers SHG. This can be through the NULM funds.

4.3 On-field challenges

1. In majority of C class ULB it was observed that most of wastepickers collecting scrap from city or at processing site are residents of nearby villages. Hence, in this case formation of SHGs for them might not be possible for the city generating the livelihood opportunities

Approach can be considered where the ULB generating livelihood opportunities can issue wastepickers ID card to have access of waste and SHGs working in waste management sector should work with or deploy such wastepickers as ready resource working towards waste management ecosystem

2. It was observed that the wastepickers of age more than 60 years were also working as resource for waste sorting and segregation. Being self-dependent or only person earning from the family the person can neither stop work nor can they be involved as a part of SHGs system. Approach towards such case should be with empathy and social gain where ULB should give ID card to wastepickers as an access to waste and can provide livelihood opportunity to suffice their daily needs

3. Based on the economic conditions around the city the wastepickers may have better revenue options outside the city limit considering access to bulk industrial waste/tourist waste etc. This is a case where the resources of the city functional towards improved waste scenario of the surrounding cities

Approach towards this needs to be based on the scale of case discussed. If it is a parallel business structure operating outside city limit. In case of a smaller group of citizens they can be provided with waste picker id cards providing access to waste social welfare benefits and in case of bigger group, community can be mapped and provided with the social welfare schemes under the city administration

One main objective of promoting SHG federations is to overcome the inherent limitations of small and informal groups—the SHGs—such as limited resources, capacity, and negotiation and bargaining powers, and an inability to deal with the outside world—the government, mainstream institutions, markets, etc.*

SHG Federation: An Institutional Innovation to Sustain SHGs - C.S. Reddy

Chapter 5- Potential funding sources for ULBs for waste picker integration

5.1 SBM 2.0

With a financial outlay of ₹1,41,600 crores for SBM-U 2.0, ULBs need to budget for projects with wastepicker integration.[2] In the SWM DPRs prepared for each ULB, status of the wastepicker integration should be accessed and appropriate model for integration should be designed. The budget for the same can be part of the DPR.

Additionally, state can provide funding to support the activity of enumeration of wastepickers through an NGO or agency, under the State Mission Directorate for SBM.

5.2 NULM

The amended DAY-NULM guidelines encourage the formation of SHGs of those from vulnerable occupations, such as rag pickers and wastepickers. These groups may include male members as well and are eligible for all benefits under DAY-NULM, such as revolving fund support, capacity building support, and interest subvention for loans, access to skills training and placement programs, as well as services through City Livelihoods Centres (CLCs).[3] Thus funds from NULM can directly be used for training of Wastepicker SHGs and providing them the loans to participate and operate collection or processing plants.

5.3 User Fees

Wastepicker integration models such as Swachh and Hasirudala have shown that user fees collected directly from the households can also be source of income for wastepickers. To facilitate the same, ULBs should approve the collection of user fees from the households by the wastepickers. A general body resolution for the same should be made.

Alternatively, the ULB can collect user fees directly from properties or households and make provision from the same to undertake the wastepicker' s survey and projects of integration annually.

5.4 Private sector

With the Plastic EPR rules getting stringent, several consumer goods companies and exploring alternatives to collect and recycle plastics. Such project can be designed with wastepicker integration and ULBs can partner with companies. The companies may fund such projects through their CSR specifically for projects that engage wastepickers into the Solid waste management systems of the city.

[2] *Posted On: 12 OCT 2021 8:37PM by PIB Delhi*

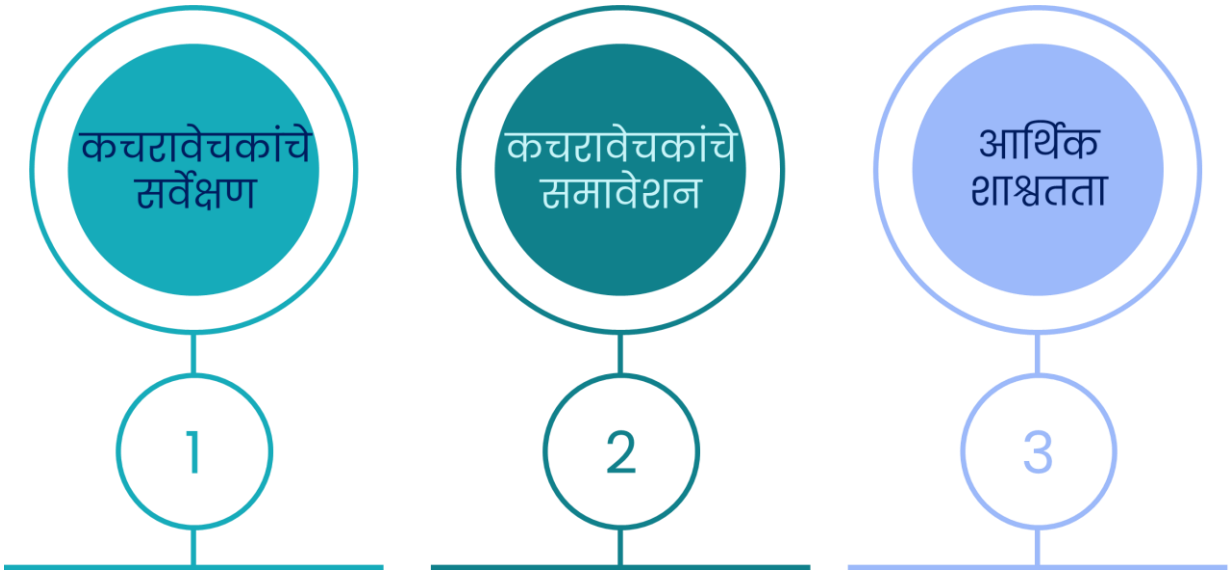
[3] *EMPOWERING MARGINALIZED GROUPS - CONVERGENCE BETWEEN SBM AND DAY-NULM ,March 2018*

Annexure 1 – Marathi guidelines for Wastepickers survey

कचरावेचकांच्या सर्वेक्षणासाठीचा कृती आराखडा (Action Plan)

कचरावेचकांचा घनकचरा व्यवस्थापनामध्ये समावेश हा घनकचरा व्यवस्थापन नियम 2016 व तसेच स्वच्छ भारत अभियानांतर्गत एक महत्त्वाचा मुद्दा आहे. परंतु छोट्या शहरांमध्ये तसेच नगरपंचायतींमध्ये सर्वेक्षणासाठी पुरेशी यंत्रणा व मार्गदर्शनाअभावी कचरावेचकांचा समावेश करणे शक्य होत नाही.

<u>कचरावेचकांचे समावेशन करण्यासाठी ३ महत्वाचे टप्पे आहेत:</u>



यासाठी देशभरातील कचरा वेचकांसाठी काम करणाऱ्या विविध संस्था व मॉडेल्स यांचा अभ्यास करून आपण कचरावेचकांचा समावेश योग्य प्रकारे कसा करू शकतो हे या कृती आराखड्यातून मांडण्याचा प्रयत्न करत आहोत.

कचरा वेचकांचे सर्वेक्षण कसे करता येईल?

कचरावेचकांच्या सर्वेक्षणासाठी ३ महत्वाच्या पायऱ्या आहेत

A. कचरा वेचकांना कुठे शोधाल?

- कचरा वेचकांचे सर्वेक्षण करण्यासाठी पहिल्यांदा आपल्या शहरात मोठ्या प्रमाणात कचरा निर्मिती करणारे स्त्रोत शोधावेत म्हणजेच हॉटेल्स दुकाने व्यावसायिक आस्थापने इत्यादी
- याचबरोबर शहरांमध्ये ज्या ठिकाणी कचरा साठतो अशी ठिकाणे म्हणजेच GVPs तसेच डम्पिंग ग्राऊंड.
- आपल्या शहरातील व आसपासच्या ठिकाणाजवळील भंगार विक्रेते दुकाने स्क्रॅप शॉप

B. कचरावेचकांची प्राथमिक माहिती

प्राथमिक सर्वेक्षणासाठी नगरपालिकेचा कर्मचारी वर्ग, शहरातील स्वयंसेवी संस्था व बचत गटांच्या मदतीने गट तयार करावेत. २-२ च्या गटाने ज्यावेळेस कचरावेचक जातात अशा वेळेस जाऊन कचरावेचकांची भेट घ्यावी व त्यांना प्राथमिक माहिती विचारावी जसे कचरावेचकाचे नाव, कुटुंबातील इतर सदस्य जे कचरावेचनाचे काम करतात, अंदाजे वय व राहण्याचे ठिकाण.

सर्वेक्षणाचे ठिकाण	कचरावेचकाचे नाव	वय	कुटुंबातील कचरावेचन्याचे काम करणाऱ्या इतर सदस्यांची संख्या ठिकाण	रहाण्याचे ठिकाण/ वस्ती

C. वस्ती पातळीवरील मीटिंग

प्राथमिक माहिती आल्यानंतर नगरपालिकेचा कर्मचारी वर्ग, शहरातील स्वयंसेवी संस्था व बचत गटांच्या मदतीने ५-५ चे गट तयार करावेत.

या गटांनी कचरावेचकांच्या वस्त्यांमध्ये जाऊन त्यांच्यासोबत संवाद साधावा व त्यांच्या बाबत अधिक माहिती जाणून घ्यावी तसेच त्यांना बचत गटाचे महत्व व त्यांचे आर्थिक सक्षमीकरण करण्यासाठी कशाप्रकारे काम करता येईल याबाबत सांगावे.

या गटांनी महिन्यातून किमान दोन वेळा वस्ती पातळीवर जाऊन कचरावेचकांसोबत संवाद साधावा व त्यांना बचत गट स्थापन करण्यासाठी प्रोत्साहित करावे.

रहाण्याचे ठिकाण/ वस्ती	कचरावेचकाचे नाव	वय	काम करण्याचे ठिकण	साधारण उत्पन्न	येणाऱ्या अडचणी

कचरावेचकांचे समावेशन:

कचरावेचकांचे सर्वेक्षण केल्यानंतर त्यांना कचरा व्यवस्थापनाच्या कामांमध्ये समाविष्ट करण्यासाठी खालील गोष्टी करणे आवश्यक आहे

१. कचरावेचकांना कामाबाबतचे ओळखपत्र देणे

२. कचरावेचकांना समावेशनाचे महत्व सांगणे - शाश्वत आर्थिक उत्पनाबाबत हमी, कचरा संकलनासाठी आवश्यक संरक्षक साधने उपलब्ध करून देणे

३. आरोग्यविषयक सुविधा उपब्लब्ध करून देणे

४. बचत गटाचे/स्वयंसेवी संस्थे मध्ये समावेशन करून त्यामार्फत कचरावेचकांना काम देणे.

A. कचरा वेचकांना कामाबाबतचे ओळखपत्र देणे

सर्वेक्षण केलेल्या कचरा वेचकांना नागरपालिके तर्फे ओळखपत्र देणे हि सर्वेक्षणानंतरची पहिली पायरी आहे. यामुळे कचरावेचकांचा कचऱ्यावरील अधिकार कायम राहण्यास मदत होईल.

ओळखपत्रामध्ये खालील गोष्टींचा समावेश असावा:

नगरपालिकेचे नाव	
कचरावेचकांचे नाव: वय: पत्ता: सध्याचे काम : फिरून कचरा गोळा करणे/ डेपो वर कचरा वेचणे कामाचा अनुभव:____वर्षे	फोटो

B. कचरावेचकांना समावेशनाचे महत्व सांगणे-

कचरा वेचकांचा घनकचरा व्यवस्थापनात समावेश करण्यासाठी तसेच इतर आरोग्य विषयक सुविधा मिळण्यासाठी नगर पालिकेचे ओळखपत्र असणे आवश्यक असेल. कचरा वेचकांना ओळखपत्र दिल्यावर त्यांच्यासोबत बैठक घ्यावी. या बैठकीमध्ये त्यांना समावेशनाचे महत्व, समावेशनाद्वारे शाश्वत आर्थिक उत्पनाबाबत हमी, कचरा संकलनासाठी आवश्यक संरक्षक साधने उपलब्ध करून देणे तसेच त्यांचे जीवनमान उंचविण्यासाठी मदत होईल याबाबत माहिती द्यावी. हि बैठक नगरपालिकेचे मुख्याधिकारी व प्रशासक यांच्या अध्यक्षतेखाली घेऊन यामध्ये आरोग्य विभाग, NULM अधिकारी, बचत गटाचे सक्रिय प्रतिनिधी यांचा समावेश असावा.

C. आरोग्याविषयी सुविधा उपलब्ध करून देणे

कचरा वेचकांसाठी आरोग्य तपासणीसाठी चे शिबीर आयोजित करणे व याबरोबर त्यांना आरोग्याविषयी चांगल्या सवयी, शारीरिक स्वच्छता इ. चे महत्व पटवून देणे.
आरोग्य अधिकाऱ्यांमार्फत उपलब्ध सरकारी योजनांची माहिती देणे. व आवश्यक असल्यास योजनेसाठीची आवश्यक ती कार्यवाही करण्यास मदत करणे आरोग्य अधिकाऱ्यांमार्फत उपलब्ध सरकारी योजनांची माहिती दे

D. बचत गटाचे/स्वयंसेवी संस्थे मध्ये समावेशन

कचरा वेचकांचे समावेशन करताना २ प्रकारे करता येऊ शकते:
१. कचरावेचकांचा स्वयंसेवी संस्थेमार्फत समावेश करणे
२. कचरा वेचकांचा बचत गट स्थापन करणे

1. कचरावेचकांचा स्वयंसेवी संस्थेमार्फत समावेश करणे

ब व क नगरपालिका, तसेच नगरपंचायतींमध्ये कष्टकरी वर्गासाठी स्वतंत्रपणे काम करणाऱ्या स्वयंसेवी संस्था सहसा उपलब्ध होत नाहीत. परंतु अशा संस्था असल्यास या संस्थांचे सदस्यत्व कचरावेचकांना देणे व कचरावेचकांचे किमान (६०%) सदस्यत्व (यामध्ये नागरपालिकेमार्फत सर्वेक्षण केलेल्याच कचरावेचकांचे समावेशन करणे बंधन कारक असेल) असणाऱ्या सहकारी संस्थांना नागरपालिकेमार्फत कचरा व्यवस्थापनाचे काम देण्यात येऊ शकते.

2. कचरा वेचकांचा बचत गट स्थापन करणे

जेथे स्वयंसेवी संस्था उपलब्ध नाहीत अशा नगरपालिकांमध्ये कचरावेचकांचा बचत गट स्थापन करता येऊ शकतो. यामध्ये सर्वेक्षण केलेल्या कचरा वेचकांना एकत्र घेऊन NULM, आरोग्य विभाग व कष्टकरी वर्गासाठी काम करणाऱ्या व्यक्ती यांच्या मार्फत कचरावेचकांना बचत गटाचे महत्व सांगून बचत गट स्थापन करणे.

आर्थिक शाश्वतता- कचरावेचकांना काम/रोजगार उपलब्ध करून देणे

यामध्ये २ महत्त्वाच्या गोष्टी लक्षात घेणे आवश्यक आहे:

1. **घनकचरा व्यवस्थापनाशी निगडित कामे:** कचरा वेचकांना शाश्वत रोजगार देण्यासाठी आपण त्यांना कोणत्या कामांसाठी समावेश करून घेऊ शकतो
2. **काम देण्यासाठीचे माध्यम:** काही कामे कचरा वेचकांच्या बचत गटांना /संस्थेला देण्याची तरतूद करणे.

घनकचरा व्यवस्थापनाशी निगडित कामे:	
घनकचरा संकलन	**घनकचरा संकलनासाठी न. पा. च्या गाडीवर कचरा विलगीकरणासाठी हेल्पर म्हणून नियुक्त करणे (ठेकेदारामार्फत/बचत गटामार्फत काम देणे)**
केंद्रीय घनकचरा प्रकल्प-	**केंद्रीय घनकचरा प्रकल्पावर कंपोस्टिंग/बायोगॅस प्रकल्प चालवणे व सुक्या कचऱ्याचे वर्गीकरण करणे**
MRF (सुक्या कचऱ्याचे व्यवस्थापन)	**घनकचरा प्रकल्पावरील सुक्या कचऱ्याचे वर्गीकरण करून पुनः चक्रीकरण करणे**
रस्ता झाडनकाम	**न. पा. मार्फत ठेका पध्दतीने रस्ते झाडण्याचे काम कचरावेचकांच्या बचतगटामार्फत करणे**

(टीप: तांत्रिक अडचणींमुळे एखादे काम बचत गटास देणे शक्य नसल्यास व ठेकेदारामार्फत करावयाचे असल्यास ठेकेदाराच्या करारनाम्यामध्ये कचरावेचकांना काम देण्यासाठीची तरतूद करणे)

कचरावेचकांचा सर्वे

* Required

1. कचरावेचकाचे नाव *

2. अंदाजे वय: *

3. स्त्री/ पुरुष *

Mark only one oval.

- ◯ स्त्री
- ◯ पुरुष

4. राहण्याचे ठिकाण *

5. किती वर्षांपासून कचऱ्यामध्ये काम करत आहात? *

Mark only one oval.

- ◯ १ वर्षापेक्षा कमी
- ◯ १ वर्ष
- ◯ २-५ वर्ष
- ◯ ५-१० वर्ष
- ◯ १० पेक्षा जास्त

6. तुम्ही कोणासोबत काम करत आहात? *

Mark only one oval.

- ◯ ठेकेदारसोबत
- ◯ स्वतः फिरून कचरा वेचणे

7. तुम्हाला दिवसाला अंदाजे किती उत्पन्न मिळते? *

Mark only one oval.

- ◯ १००-३०० रुपये
- ◯ ३००-५०० रुपये
- ◯ ५००-१००० रुपये
- ◯ >१००० रुपये

8. तुम्ही कोठे कमी करता? *

Mark only one oval.

- ◯ कचरा डेपोवर सुका कचरा छाटणे
- ◯ डम्पिंग ग्राउंड वर सुका कचरा छाटणे
- ◯ कचरा डेपो व डम्पिंग ग्राउंड दोन्ही ठिकाणी
- ◯ शहरामध्ये फिरून कचरा गोळा करणे

9. *

तुम्हाला हातमोजे, मास्क, गमबूट इत्यादी सुरक्षासाहित्य किंवा इतर आरोग्यविषयी सुविधा उपलब्ध आहे का?

Mark only one oval.

- ◯ हो
- ◯ नाही
- ◯ काही प्रमाणात

10. तुम्हाला माहित आहे का तुमचा नागरपालिके मार्फत स्वतंत्र बचत गट स्थापन करता येऊ शकतो? *

Mark only one oval.

- ◯ हो
- ◯ नाही

11. स्वतः चा बचत गट असण्याचे फायदे तुम्हाला माहित आहेत का? *

Mark only one oval.

- ◯ हो
- ◯ नाही

12. बचतगटाच्या माध्यमातून तुम्हाला पुरेशे उत्पन्न सातत्याने मिळण्यास मदत होत असेल तर बचत गट स्थापन करण्यास तयार आहार का? *

Mark only one oval.

- ◯ हो
- ◯ नाही

13. बचतगटाची २०० रुपये किमान मासिक वर्गणी भरण्यास तयार आहात का? *

Mark only one oval.

- ◯ हो
- ◯ नाही

Annexure 2 - SHG willingness survey:

Name of the SHG:

Sr. no	Parameters	Details
1	How many members are part of the SHG?	
2	When was your SHG formed? – Year and month.	
3	Did you get the first revolving fund from the government? (फिरता निधी)	
4	How many times do you meet in a month?	
5	What is your monthly contribution?	
6	What are the types of activities you currently do for income generation?	
7	In which of the following SWM related activities will you be willing to work? ● Street sweeping ● Door to door collection of waste ● Operating a Dry waste collection center ● Awareness generation on waste management ● Operating a Composting/ Biogas unit ● Collection of specific types of waste at doorstep? ● Recycling of waste into products – Agarbhati making, Plastic/MLP boards, Cloth bags from old clothes ● Running 3R shop	
8	Why would you prefer the one selected?	
9	Why would you not prefer to work in other areas?	
10	What is the monthly income you would expect?	
11	How many hours of work are you willing to do?	
12	How can the ULB support/ facilitate your participation in Waste management?	

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