Training Manual on

Operation & Maintenance of Micro Composting Centre for Swachha Karmis and Wealth Centre In-Charge

Capacity Building Program for Mission Shakti SHGs Engaged in Sanitation Based Livelihoods

H & UD Department, Government of Odisha

Technical Support

Urban Management Centre

Disclaimer

Housing & Urban Development Department

The Housing & Urban Development Department, Government of Odisha, is the state's nodal department to manage urban development affairs including the Municipal Solid Waste Management. The Department, with support from the Urban Management Centre (UMC), has designed a state-wide capacity building program. The program aims to build the knowledge, skills and capacity of Mission Shakti Self Help Groups and strengthen the systems for effective and efficient management of municipal solid waste through the wealth centres.

Urban Management Centre

Urban Management Centre is a women led non-profit organization dedicated to building resilient systems for inclusive and equitable development. We work with governments to strengthen local governance and build lasting institutional structures. We also work directly with vulnerable people to ensure that they have the tools and support they need. Over the last 25 years, UMC and its teams have developed fundamental innovations in urban and rural development challenges such as performance assessment, capacity building, and decentralized institutional strengthening.

For more information, visit our website: www.umcasia.org

About this document

This Trainer's guide aims to prepare trainers to conduct successful training for Swachha Karmis and Wealth Centre In-charge. The training for thiS target group is envisioned to be very interactive and simple for ease of their understanding and active participation in the training program. This trainer's guide provides the trainers an easy-to-follow detailed instructions on how to conduct sessions using Trainer's guide given for each slide.

This trainer's guide is for trainers who may be empaneled by the state level authority to deliver training for building the capacities of Mission Shakti Self Help Groups engaged in sanitation-based livelihood activities.

Instructions for the trainer

- Thoroughly prepare yourself beforehand for the training session with clear understanding of the topics/ content and try to avoid reading the lines from PPT/Flip Book
- While imparting classroom training, trainer must use different training methods to make the session more interesting, participatory and keep participants engaged throughout the session
- Give clear directions to the participants if you are conducting any exercise or group- work
- Provide opportunity for questions- list out the questions and answer them one by one
- Manage time as per the session schedule
- Strictly follow the content and don't include or exclude any contents.
- Click at least 5 photographs/ short video (if possible) of the training session in the classroom and in-field
- Submit the attendance sheet and photographs to the Sanitation Expert/ UMC's Coordinator for certification and onward processing for release of honorarium

Preparations before training

- The trainer must report to the venue at least one hour before the training and ensure the arrangement of the banner, white board and training tools
- Keep the “attendance sheet” ready for recording attendance of the participants with signature.
- Keep supporting materials and stationery handy for the group work/ group activity

Icebreaking

Purpose of Ice breaking session:

An icebreaker is a facilitation exercise intended to help members of a group to begin the process of forming themselves into a team. Icebreakers are commonly presented as a game to "warm up" the group by helping the members to get to know each other. The trainer will organize a game as given below:

Activity: Find your Partner, Know your Partner!!!

1. Prepare various shapes of newspaper cutting into two parts, when brought together it makes a complete shape, mix all the papers.
2. Ask each participant to take one piece of paper. (1 minute)
3. Ask participants to walk around and find out the other part of the paper from other participants to complete the shape. (2 minutes)
4. After making pairs, each pair has to interact for 2 minutes.
5. Participants have to find out their partner's name, place they belong to, one thing that he/she likes and dislikes about their work and the reason behind that.
6. Introduce their partner when asked by facilitator. (15 minutes)

List of Materials required:

- Various shape cut outs as given in the training kit

Icebreaking

Find your partner, know your partner!!!

Source: eventmanagerblog.com as on 24.11.21

Training schedule

This 2-day training program focuses on to develop understanding on municipal solid waste management system and roles and responsibilities of Swachha Karmis and Wealth Centre In-charge at Wealth Centres.

The training will be conducted in two parts:

Day-1: Classroom training mainly focusing on the following aspects -

1. Background and Introduction to the Capacity Building Program
2. What is waste, Types of Waste , Source of Waste , Solid Waste Management Value Chain
3. Operation and Maintenance of MCC-Process, record maintenance, Safety measures
4. Communication Skills

Day – 2: Practical Session

1. Practical training on process in MCC

Training schedule

Session	Contents to be covered	Duration
Day – 1: Classroom Session (Time: 2.30 PM to 5.30 PM)		**3 hours**
Pre training assessment		15 minutes
Session – I	Background and Introduction to the Training Program	15 minutes
Session – II	What is waste, Types of Waste , Source of Waste , Solid Waste Management Value Chain	15 minutes
Session – III	Operation and Maintenance of MCC-Process, record maintenance, Safety measures	75 minutes
Session – IV	Communication Skills	45 minutes
Post Training assessment		15 minutes
Day – 2: Practical Session (Time: 7.30 AM to 9.30 AM)		**2 hours**
Practical training on process in MCC		2 hours

Session – 1 Background and Introduction to the Training Program

The trainer will start by introducing the capacity building program where the vision, mission, and objectives of the state-wide capacity building program will be discussed.

Session - 1

Background and Introduction to the Training Program

State’s vision for O&M of Wealth Centres

The trainer should emphasize on overall objective of state’s program which is to create sanitation-based livelihoods for Mission Shakti Groups and strengthen their capacities.

State's vision for O&M of Wealth Centres

"Swachha Odisha, Sustha Odisha"

by effective and efficient management of waste to create wealth

Mission

The trainer will give introduction to the state's mission of collectivizing sanitation workers, waste pickers, transgenders and empowering them with the knowledge and skills for managing the solid waste management value chain.

Mission

"Mission Shakti SHGs of sanitation workers, waste pickers and transgenders are skilled and empowered to lead waste management for cleaner and greener cities, which brings employment, assured income and dignity for them."

Objective of Capacity Building Program

The trainer will ask the participants if they are aware about the program.

Then, trainer will introduce the objectives of the capacity building program as shown in the slide.

Objective of Capacity Training Program

- To support MS-SHGs to manage solid waste to create wealth
- To build knowledge, skills and agency of MS-SHGs for operation and maintenance of wealth centres
- For effective and efficient operation and management of wealth centres for processing “waste to wealth”

Stakeholders - Municipal Solid Waste Management

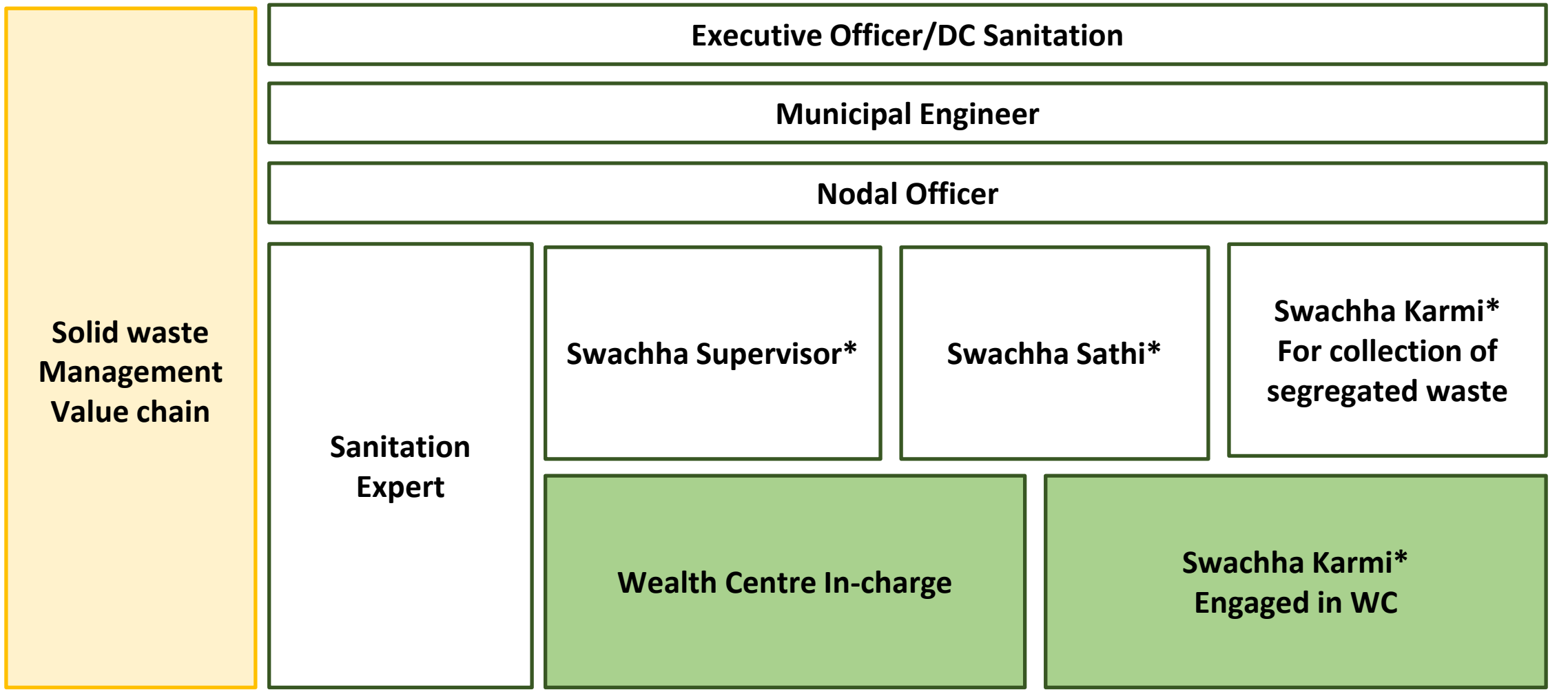
Municipal waste management is the prime responsibility of the Urban Local Body, hence various stakeholders are involved in the management of municipal solid waste.

Every individual has to play their role in implementation of the program, start from Executive Officer (EO) to Swachha Karmis.

The trainer will explain the involvement of Swachha Karmis and Wealth Centre In-Charge in source segregation, waste collection and transportation, and management of the Wealth Centre.

Say: You as a Swachha Karmi and Wealth Centre In-Charge play a very important role in management of municipal solid waste.

Stakeholders - Municipal Solid Waste Management



**MS-SHG members*

MS-SHGs of waste pickers or others engaged at MCC

The trainer will ask the participating MS-SHGs members about their mode of engagement in MCC.

Based on the particular mode of engagement of MS-SHGs members present in the training, the trainer will emphasize on the mode of engagement and discuss about elevation of MS-SHGs engagement leading to profit sharing mode. However, the discussion has to be contextual to the situation.

MS-SHGs of waste pickers or others engaged at MCC

- Odisha prioritizes engaging MS-SHGs of waste pickers, trans-genders and/or others for operation and maintenance of MCC
- ULBs identify MS-SHGs groups and builds their capacities for effective and efficient operation and maintenance of MCC
- MS-SHGs' members can be engaged as Swachha Karmis or MS-SHGs may be engaged to manage MCC as a profit-sharing partner.
- ULBs will evaluate the performance of MS-SHGs in every six month to grade their performance
- Based on their grading, further handholding and capacity building will be arranged

Written Contract between ULB and MS-SHGs

The trainer will discuss about the importance of contract between ULB and MS-SHGs as discussed in the next slide.

Say: The written contract must have;

1. MS-SHG friendly contract
2. Defining clear role and responsibilities of MS-SHGs and UL
3. Mode of payment of incentives and profit sharing
4. Maintenance responsibilities
5. Managing situations of risk and uncertainties / Theft / damage
6. Renewal / Termination of Contract
7. Insolvency / forced majeure

The written contract is a formal document the safeguard the rights and entitlements of MS – SHG.

Written Contract between ULB and MS-SHGs

- MS-SHG friendly contract
- Defining clear role and responsibilities of MS-SHGs and ULB
- Mode of payment of incentives and profit sharing
- Maintenance responsibilities
- Managing situations of risk and uncertainties / Theft / damage
- Renewal / Termination of Contract
- Insolvency / forced majeure

"Written contract" will help in protecting the rights and entitlements of MS – SHG

Session – 2 Understanding Municipal Solid Waste

Say: As a Swachha Karmi and Wealth Centre In-charge, you need to have a common understanding on the following.

- What is waste?
- Where does the waste come from?
- Quantity of waste generated at ULB level.
- Types of waste
- Municipal solid waste management value chain

Session - 2

What is waste, Types of Waste , Source of Waste , Solid Waste Management Value Chain

What is Waste?

Before starting the session on municipal solid waste management, the trainer will trigger the discussion with participants by asking basic questions to make the session interactive.

Before explaining "what is waste?", the trainer will ask the participants what is their understanding about the waste.

- The trainer will randomly ask to participants to speak. For example,
  - ✓ What is waste and what you call it?
- Trainer should first listen the response of the participants and then list out the responses in a white board/ flip chart.

At the end of the exercise, trainer should summaries the meaning of waste using the next slide linking it to the responses from the participants.

List of Materials required:

- White board/ Flip chart, Marker pen/ Sketch pen

What is Waste?

What is Waste?

Say: By definition, waste means any material or substance that has been discarded after it has served its purpose, is "Waste".

It can also be called "Trash", "Garbage", "Kachra", "Kuda", etc.

What is Waste?

Any material that is discarded after its primary use is called ‘WASTE’ – “unwanted” or “useless”

Source: Waste Management_ IEC Campaign, An initiative of : Ahmedabad Municipal Corporation, 2012-13

Where does the Waste come from?

The trainer here will discuss about the source of waste and the waste generators.

Say: We all generate waste. Right?

Any activity that we do generates some waste. Such as food leftovers, waste wrappers, damaged or broken electronic items, discarded clothes and so on.

The waste is generated by households, commercial establishment such as shops, offices, hotels, restaurants, malls, markets, institutional areas such as schools, colleges, public institutions, religious spaces and parks, gardens and fairs.

Basically, waste is generated everywhere and by everyone.

Where does the waste come from?

Households

Shops and commercial establishments like hotels, restaurants, malls

Institutions like schools, hospitals, colleges

Vegetable, fish and meat markets

Temples and religious places

Parks, Gardens and Fairs

Source: pngfinder.com, canstockphoto.com, classroom clipart.com, 123rf.com, pngtree.com, canstockphoto.com as on 24.11.21

Types of Waste

In order to manage the waste, first there is a need to understand the types of waste.

Before moving forward, the trainer will first ask the participants about their understanding on types of municipal solid waste.

- The discussion can be triggered by asking questions to random participants such as:
  - ✓ Do you know how many types of waste there are?
  - ✓ Can you name the types of waste?
- The trainer will make a note of the response received from the participants on white board/ Flip chart

Once the response from participants is received, the trainer will show the types of waste shown in the next slide.

List of Materials required:

- White board/ Flip chart, Marker pen/ Sketch pen
- Showing some items which are actual waste

Types of Waste

What is in our waste?

Say: Now let's see what all is there in our waste dump. The waste we generate is categorized into four major categories:

(1) Wet waste

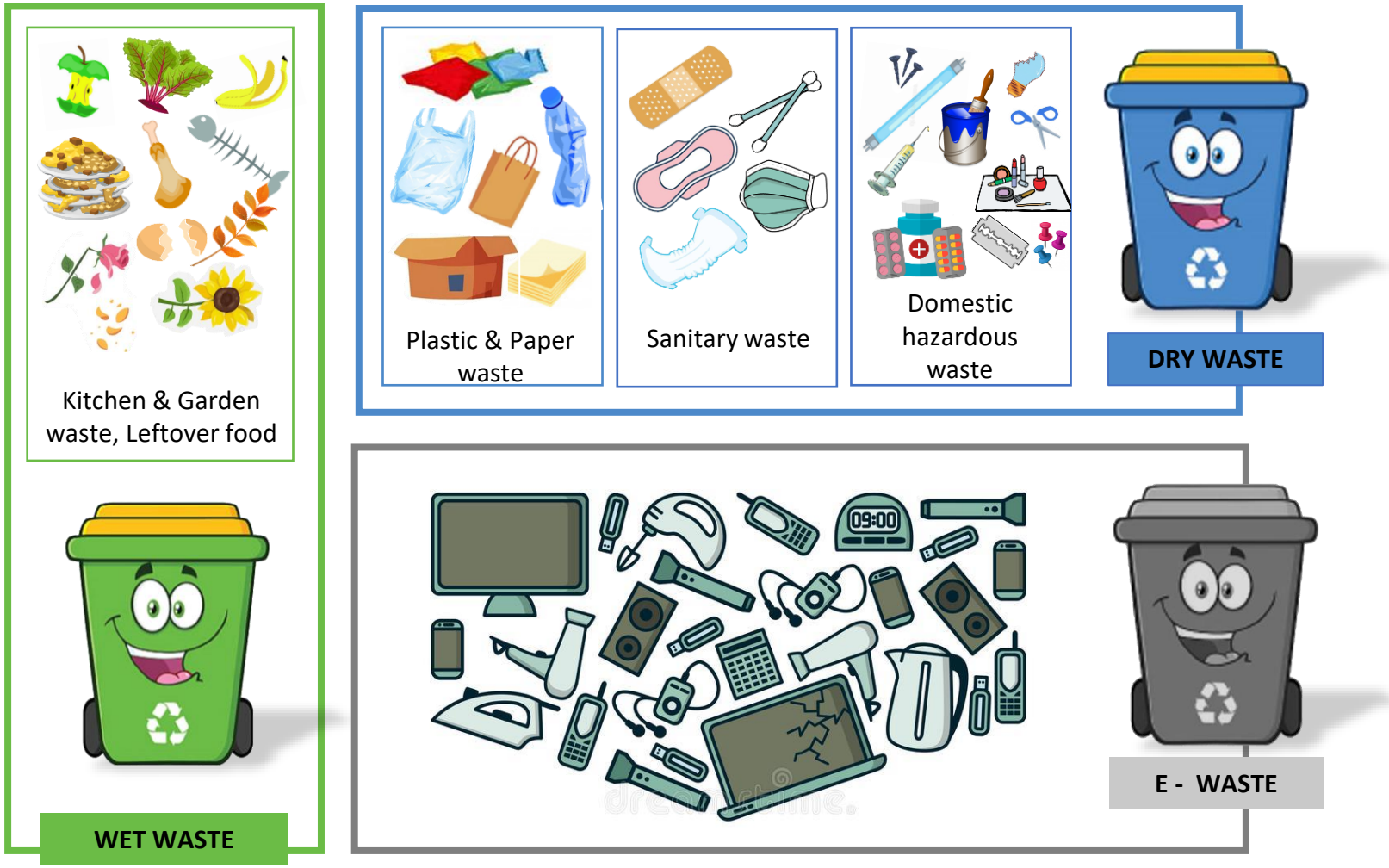
(2) Dry waste which is further categorized into two recyclable and non-recyclable waste.

(3) Domestic hazardous waste and

(4) E-waste.

Let's understand each of these in detail.

What is in our waste?



Source: MISAAL IEC material, Urban Management Centre, 2019-20, https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.dreamstime.com%2Fstock-illustration-dumpster-flying-balloon-d-illustration-image89065428&psig=AOvVaw1EeN8QuBXNXKTQ3A5M--rG&ust=1637753379374000&source=images&cd=vfe&ved=0CAsQjRxqFwoTCOjC4fuwrvQCFQAAAAAdAAAAABAJ as on 23.11.21

Types of waste as per collection

Daily Collection

Wet waste

Dry Waste

Weekly Collection

Domestic Hazardous Waste

E-waste

Let’s understand wet waste

Say: Wet waste is a type of waste that may be degraded by living micro-organisms and decomposes fast.

It includes kitchen waste such as vegetable/ fruits peels, rotten vegetable/ fruits. The garden waste such as flowers, branches, leaves are also considered as wet waste. The leftover food wastes, fish/ meat bones, eggshells and expired packaged food without the packaging.

Wet waste is also known as Bio-Degradable Waste. It is also commonly called as Green Waste.

Let’s understand wet waste

Wet waste – “Any organic material that can be degraded by micro-organisms and decomposes fast”


Kitchen waste

- Discarded food grains
- Vegetable/fruit peels

Garden waste

- Flowers
- Leaves
- Grass


Leftover food

- Leftover cooked Food
- Fish/meat bones
- Egg shells
- Expired packaged food (without packaging)

Source: MISAAL IEC material, Urban Management Centre, 2019-20; depositphotos.com as on 24.11.21

Let’s understand dry waste

Say: Dry waste is a type of waste that cannot be degraded by micro-organisms and takes longer time to decompose. The dry waste is can also be called non-biodegradable waste. It further categorizes in two categories: (1) Recyclable and (2) Non-recyclable

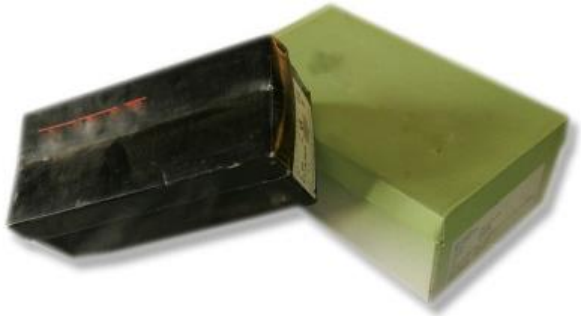
(1) Recyclable waste includes materials such as paper, cardboards, plastic, metal, tins, rubber, glass and dry coconut shells and such similar materials. Recycling is the process of turning used materials into new products.

(2) Non-recyclable waste includes materials such as thermocol, Styrofoam, tetra packs, cloth, etc. These waste cannot be recycled.

Let’s understand dry waste

Dry waste – “Any waste that cannot be degraded by micro-organisms takes longer time to decompose”

Papers



Cardboards

Plastic

PET bottles

Metal

Tin cans

Glass

Thermocol/ Styrofoam

Source: Waste Management_ IEC Campaign, An initiative of : Ahmedabad Municipal Corporation, 2012-13; thermocolinsulation.com as on 25.11.21

Let’s understand domestic hazardous waste

Say: The “Domestic hazardous waste” is any hazardous waste generated at the household level. It generally consists:

- Discarded paint drums
- Pesticide cans
- CFL bulbs
- Tube lights
- Expired medicines
- Broken mercury thermometers
- Used batteries
- Used needles and syringes
- Soiled bandages, etc.
- Sanitary Waste

Let’s understand domestic hazardous waste

Domestic hazardous waste – “Any hazardous waste which is generated at the household level”


Expired medicines

Used paint containers

Used Batteries

Sanitary waste


Bulbs & Tube lights

Used Blades

Injections & Syringes

Source:, Waste Management_ IEC Campaign, An initiative of : Ahmedabad Municipal Corporation, 2012-13; Urban Management Centre, 2019-20

Let’s understand e - waste

Say: Any electrical and electronic equipment, whole or in part or rejects from their manufacturing, refurbishment, and repair process, which are intended to be discarded as waste is known as E-waste. It generally consists of broken/ damaged/ unused electronic items such as:

- Television, radio, music system
- Computer and its accessories
- Home appliances (mixer grinder, microwave-oven, toaster, water filter, gas-stove, etc.)
- Telephone, Mobile phone, etc.

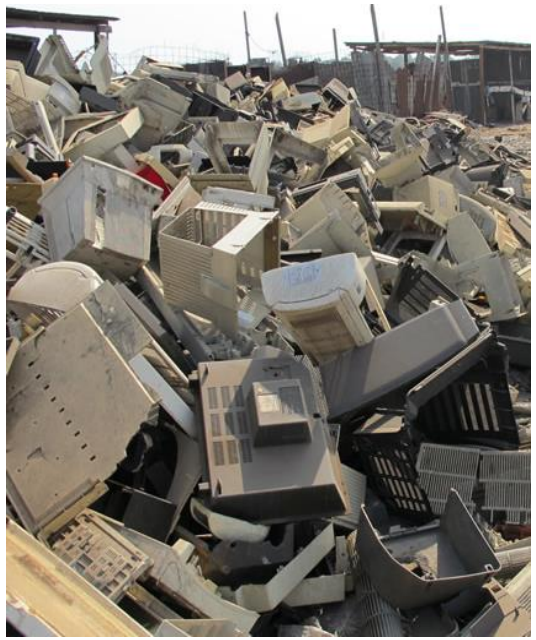
The ULB is responsible for collection, storage, and disposal of e-waste. The waste generators will have to hand over the E-waste to the waste collector of ULB. The e-waste management rules specify that the collected e-waste at the collection point/MRF should channelize the e-waste to recyclers.

Let’s understand e - waste

E- waste – “Any electrical and electronic equipment, which is discarded and has no further use”

Television, radio, music system

Telephones, Mobile phones



Computer, its accessories, home appliances

Source:, Waste Management_ IEC Campaign, An initiative of : Ahmedabad Municipal Corporation, 2012-13; Urban Management Centre, 2019-20

Municipal Solid Waste Management – Value Chain

The trainer will discuss about the Solid Waste Management value chain.

SWM Value Chain – To efficiently manage the solid waste generated within the local body area, it is necessary to understand the SWM value chain. The management of municipal solid waste begins with waste generation, source segregation, collection and transportation of waste, it's processing and treatment and ends with the scientific disposal of waste.

While explaining the Municipal Solid Waste Management Value Chain, the trainer will talk about the four steps in detail as discussed in the subsequent slides.

Say: As shown here in the diagram, the solid waste management value chain has four steps: Source segregation, collection and transportation, processing and disposal.

Each of these components of value chain are required to recover potential valuable resources and allow the reuse and recycling of such resources.

To realize the "wealth" hidden in "waste", the ULBs are responsible to establish a system for the management of each component of value chain starting from waste generation to waste disposal.

We will now understand each of the step of value chain in detail.

Municipal Solid Waste Management – Value Chain

1. Segregation at source

2. Collection and Transportation

3. Processing

4. Disposal

Source:, Waste Management_ IEC Campaign, An initiative of : Ahmedabad Municipal Corporation, 2012-13; Urban Management Centre, 2019-20

After building the understanding on Solid Waste Management Value Chain, the trainer will discuss about the wet waste processing at Wealth Centre and operation and maintenance of Micro Composting Centres.

The Government of Odisha has decided to take up decentralized solid waste management system for processing municipal waste across the state by establishing Micro Composting Centres (MCCs) and Material Recovery Facilities (MRFs) in all ULB. The facility where MCC and MRF are co-located will be known as "Wealth Centre".

Session - 3

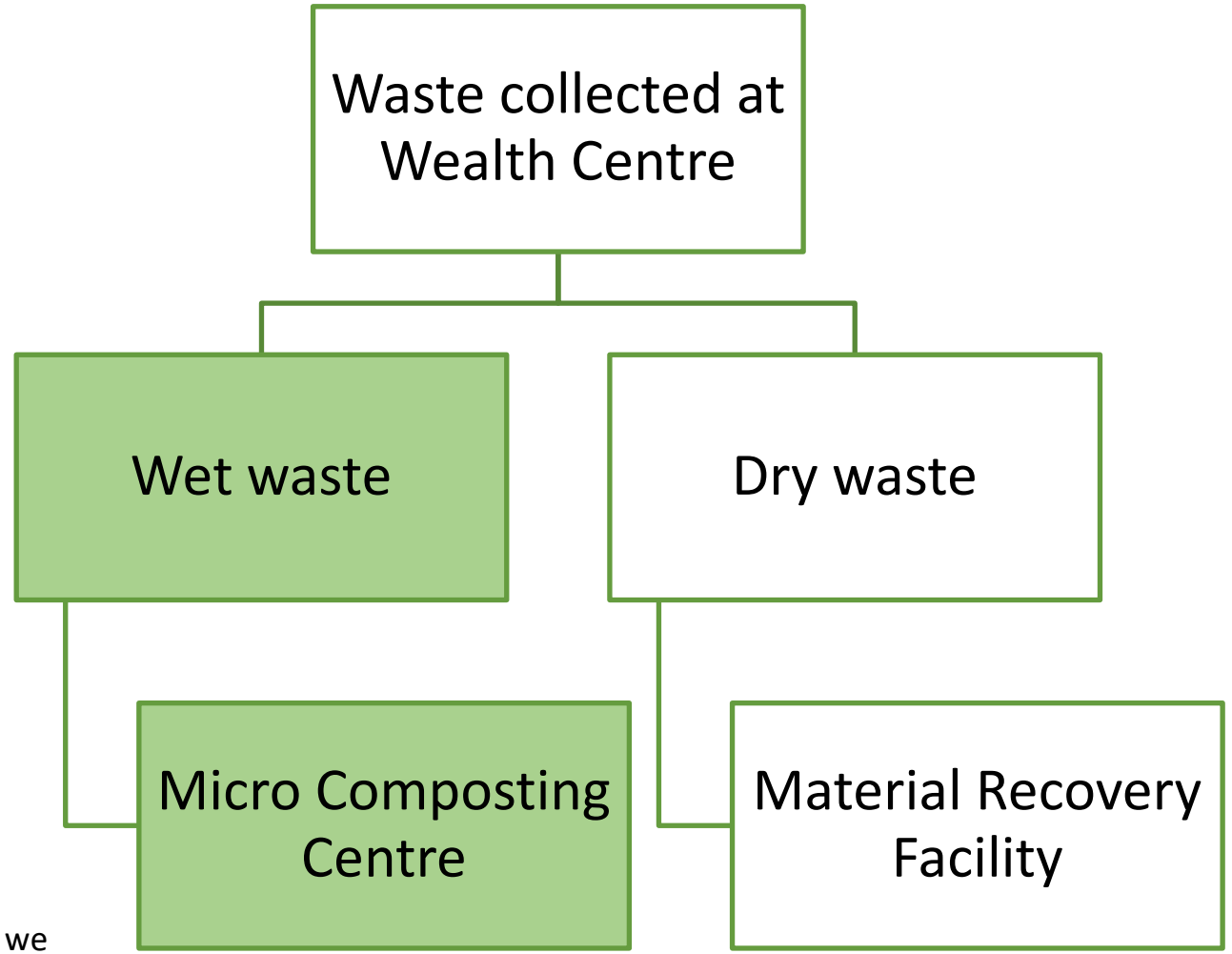
Operation and Maintenance of MCC-Process, Record Maintenance, Safety Measures

Processing of Wet Waste

Say: Once the waste collected from the households in segregated manner, it is reaches at the designated wealth centres, where the wet waste is received at the MCC, and dry waste is received at the MRF.

Let's understand what MCC is and how the wet waste is processed there.

Processing of Wet Waste



For the purpose of this manual, we will be focusing on O&M of MCC

What is Micro Composting Centre?

Say: A Micro Composting Centre (MCC) is a facility where wet waste is processed to compost and is packed as "Mo Khata" for sale.

What is Micro Composting Centre?

- A Micro Composting Centre (MCC) is a facility where wet waste is processed to compost

Wet waste is received → **It is processed and converted into compost** → **Prepared compost (Mo khata) is packed and sold**

Source: Urban Management Centre, 2021

3.1 Processing of wet waste at MCC

Say: At MCC, the wet waste processing mainly contains six stages:

I. Keep wet waste weighment and recorded in MCC,

II. Unload the wet waste from BOV/LCV

III. Put wet waste in conveyor belt and add EM solution

IV. Shred the wet waste in uniform size

V. Put shredded waste in tubs as per schedule

VI. Collect matured compost from tubs on 42nd day

VII. Stabilise and dry the compost for 7 days

VIII. Sieve the dried compost in sieving machine

IX. Pack the finished compost

X. Sell the compost (Mo Khata)

We will understand each of these in detail.

3.1 Processing of wet waste at MCC

Source: Urban Management Centre, 2021

3.2 Preparing EM solution

Say: The wet waste processing at Micro Composting Centres requires some pre-preparations beforehand, one of which is the preparation of EM solution.

EM stands for "Effective Micro-organisms". EM consists of a wide variety of effective, beneficial and non-pathogenic microorganisms produced through a natural process and not chemically synthesized or genetically engineered.

To prepare 15 liters of EM solution, take a barrel and fill 15 liters of water. Add 800 grams of jaggery and 500 grams of curd in it. Mix it to form a homogeneous solution. (Play and explain the video by clicking on the image on right)

We need to allow this mixture to ferment by keeping it closed for 7 days. At the end of the 7 days the EM solution will be ready to use.

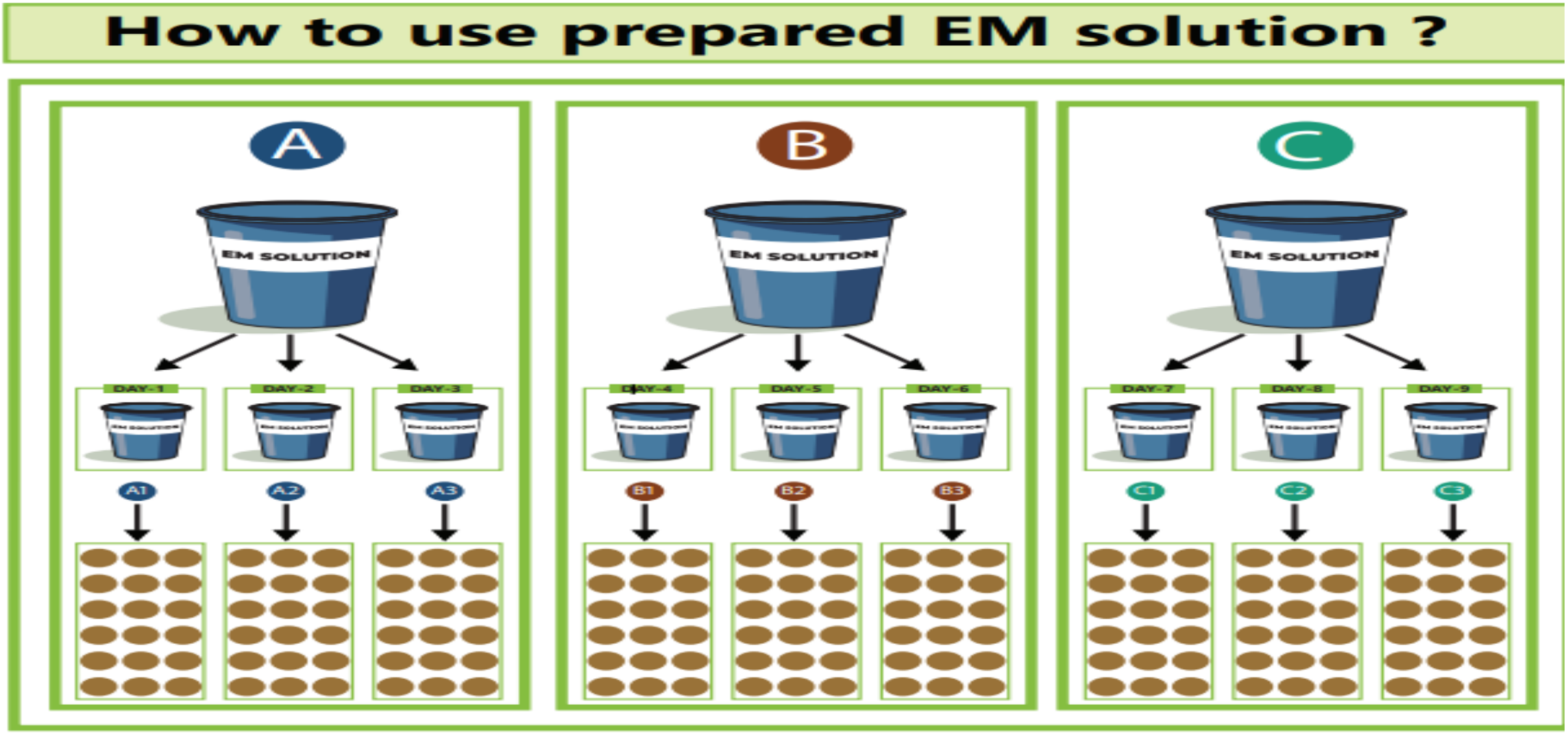
Once the EM solution is used by mixing it with equal proportion of Rice bran and Rice husk. The quantity of EM solution should be such that the mixture can be turned into balls of the size of a coconut without breaking. Keep the mixture ready to add on fresh waste.

Remember, the EM solution should be used within 3 days of preparation.

3.2 Preparing EM solution

- Allow solution to ferment for 7 days
- On the 8th day, take this solution and divide it into three equal parts (or as much as required according to the weight of wet waste received on that day) and add rice bran to form a ball.
- Crush the ball and add it to the wet waste on the conveyor belt or sprinkle the crushed ball over the wet waste in the tub.

3.2 Preparation and method to use E.M. Solution



3.2 EM Solution as per waste quantity received at MCC

Say: Although the capacity of MCC is 5 TPD, actual quantity of waste received per day is less. So, we need to prepare EM solution as per the actual quantity received not as per the capacity of MCC. Let's discuss how much EM solution we need to prepare for different quantity of waste actually received.

EM Solution as per waste quantity received at MCC

	Waste received at MCC Tons Per Day (TPD)	EM Solution		
				
		Water (in litres)	Jaggery (in Kgs)	Curd (in Kgs)
In Tons	Less than 1	15	0.8	0.5
	1.5	27	1.5	0.9
	2	36	2	1.2
	3	52	3	1.8
	4	72	4	2.4
	5	90	5	3
The Prepared EM solution to be used in 3days from the date of preparation.				

3.2 Process to use E.M. Solution(Use it within Three days)

EM Solution Preparation and Use Chart

Day & Date	EMS*	Train-1						
		Tub-1	Tub-2	Tub-3	Tub-4	Tub-5	Tub-6	Tub-7
1	A							
2								
3								
4	B							
5								
6								
7	C							
8		A1						
9			A2					
10	A			A3				
11					B1			
12						B2		
13	B						B3	
14								C1
15		C2						
16	C		C3					
17				A1				
18					A2			
19	A					A3		
20							B1	
21								B2

Day & Date	EMS*	Train-2						
		Tub-1	Tub-2	Tub-3	Tub-4	Tub-5	Tub-6	Tub-7
22	B	B3						
23			C1					
24				C2				
25	C				C3			
26						A1		
27							A2	
28	A							A3
29		B1						
30			B2					
31	B			B3				
32					C1			
33						C2		
34	C						C3	
35								A1
36		A2						
37	A		A3					
38				B1				
39					B2			
40	B					B3		
41							C1	
42								C2

EMS: EM Solution Preparation

Technical Support

3.3 Preparing composting tubs

Say: Before putting the waste inside the tub for the first time, the tubs are required to get 'Bio-dozing'.

To Bio-doze the tubs, put a 2-inch-thick dry cow dung slurry at the floor of each tub, and half-inch-thick cow dung on the inner walls of the tubs.

Then put the shredded biodegradable waste mixed with the rice-husk-mixed-effective microorganism-solution.

Place the waste inside the tub and carry on the same process for next tub on next day.

3.3 Preparing composting tubs

- Apply 1/2-inch cow dung slurry at floor of tub and layer on the inner walls before putting the waste inside for the 1st time.
- Cow dung slurry helps to speed up the composting process

Source: Urban Management Centre, 2021

3.4 Preparing wet waste for composting

Say: Once the waste is received at the MCC, unload the wet waste at the receiving yard and weigh it.

Before putting the received wet waste into the compost tubs, transfer the waste to conveyor belt and spread the waste manually across the conveyor belt and remove all the non-biodegradable waste by further segregation.

Then allow the waste to pass through the shredder. It will shred the waste into uniform size of 20-40 mm which helps the waste to get decomposed in same time.

Once the waste is shredded, sprinkle EM solution evenly on top of the waste. Then, the waste is ready to be shifted into the prepared compost tubs.

3.4 Preparing wet waste for composting

Weighing of waste → Unload wet waste → Transfer wet waste to conveyor belt

Source: Urban Management Centre, 2021

3.4 ସଜ ଅଳିଆକୁ ଶ୍ରେଡିଙ୍ଗ ମେସିନ ଦ୍ୱାରା ଛୋଟ ଛୋଟ ଖଣ୍ଡ କରାନ୍ତୁ

3.5 Composting process - Sequence of loading waste

Say: Once the compost tubs are prepared, add the shredded wet waste in the tubs in the sequence shown here.

On 1st day, put the shredded waste mixed with prepared media in 1st tub.

On 2nd day, put the shredded waste mixed with prepared media in 2nd tub.

This method is to be continued till 7th day, on which the shredded waste mixed with prepared media will be put in 7th tub.

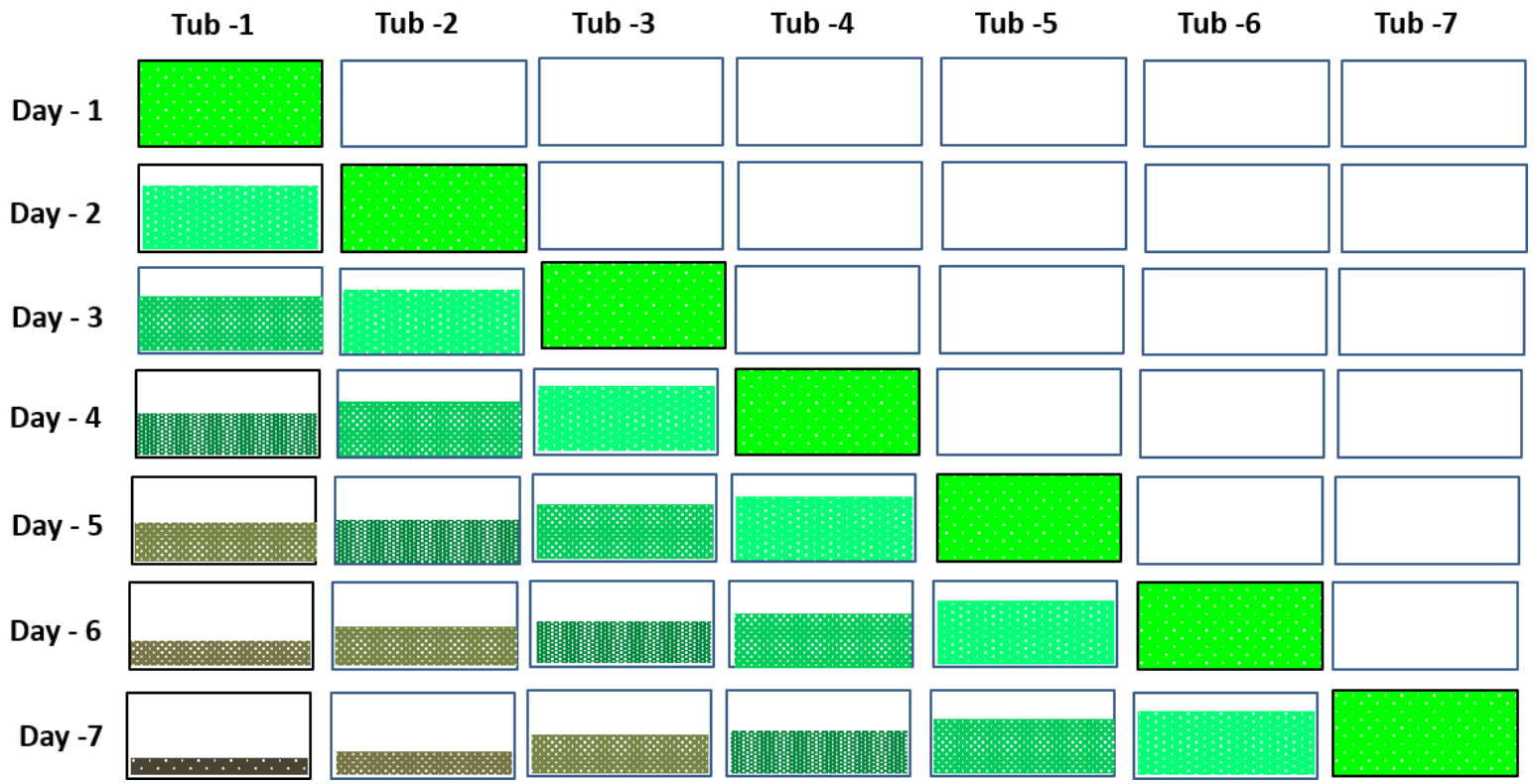
With each passing day, the waste will degrade due to bacterial activity and there will be reduction in volume of waste.

3.5 Composting process - Sequence of loading waste

Put shredded waste in the compost tubs in sequence

ROUND 1

Day 1 to 7
Tub no. 1 to 7



3.5 Composting process – Day-wise loading of waste

Say: The same process must repeat every week.

On 8th day, the waste in 1st tub would have degraded with considerable reduction in its volume. Put the freshly shredded waste mixed with prepared media again in 1st tub, on the top of 7-days-old waste.

On 9th day, the freshly shredded waste mixed with prepared media will be put again in 2nd tub, on the top of 7-days-old waste.

This method is to be continued till 14th day, on which the shredded waste mixed with prepared media will be put in 7th tub.

Similarly, on 15th day, the waste in 1st tub would have degraded with considerable reduction in its volume. Put the freshly shredded waste mixed with prepared media again in 1st tub, on the top of 14-days-old waste.

This method is to be continued till 21st day, on which the shredded waste mixed with prepared media will be put in 7th tub.

Remember, the next waste should only be put after the interval of 7 days. It means that one tub will get waste three times at the interval of 7 days per cycle.

Repeat the same process for Tubs 8-14 for Day 22-42.

3.5 Composting process – Day-wise loading of waste

Sequence in which shredded waste has **to be put** in Tub 1-7 Compost for Day 1 - 21

TUB – 1	TUB – 2	TUB – 3	TUB – 4	TUB – 5	TUB – 6	TUB – 7
Waste to be added on	Waste to be added on	Waste to be added on	Waste to be added on	Waste to be added on	Waste to be added on	Waste to be added on
DAY - 1 DAY - 8 DAY -15	DAY - 2 DAY - 9 DAY -16	DAY - 3 DAY - 10 DAY -17	DAY - 4 DAY - 11 DAY -18	DAY - 5 DAY - 12 DAY -19	DAY - 6 DAY - 13 DAY -20	DAY - 7 DAY - 14 DAY -21

TUB – 1
Round 1: 1-7 Round 2: 8-15 Round 3: 16-21

Repeat the above sequence in which shredded waste is put in
Tub 8-14 from Day 22 - 42

3.5 Composting process – Turning waste

Say: Turn the waste up and down once in every four to five days for better aeration.

You can add the EM solution before turning the waste as EM solution is also required to be added on this every 4^{th} or 5^{th} day.

3.5 Composting Process – Rotating waste

- Add EM solution to the compost tubs to speed-up the decomposition on every 5th day
- Turning of waste on every 5th day of loading waste for better aeration

Day	Train-1						
	Tub-1	Tub-2	Tub-3	Tub-4	Tub-5	Tub-6	Tub-7
1	Loading						
2		Loading					
3			Loading				
4				Loading			
5	Adding				Loading		
6		Adding				Loading	
7			Adding				Loading
8	Loading			Adding			
9		Loading			Adding		
10			Loading			Adding	
11	Adding			Loading			Adding
12		Adding			Loading		
13			Adding			Loading	
14				Adding			Loading
15	Loading				Adding		
16		Loading				Adding	
17			Loading				Adding
18	Adding			Loading			
19		Adding			Loading		
20			Adding			Loading	
21				Adding			Loading
22					Adding		
23	Adding					Adding	
24		Adding					Adding
25			Adding				
26				Adding			
27					Adding		
28	Adding					Adding	
29		Adding					Adding
30			Adding				
31				Adding			
32					Adding		
33	Adding					Adding	
34		Adding					Adding
35			Adding				
36				Adding			
37					Adding		
38						Adding	
39							Adding
40							
41							
42							

Loading waste

Adding EM solution & Turning waste

3.5 Composting Process – Sprinkling of leachate

Ask: Can somebody tell me what is 'leachate'?

Address the response and explain about leachate as required.

Say: "Leachate" is the liquid that drips out from the wet waste and gets collected into a leachate collection tank. It is rich in bacterial consortium.

Each tub shall be sloped to one side and have a drain point with jalli to collect leachate.

Leachate can be used as inoculum and can be sprinkled on the waste in tubs.

Leachate attracts flies and mosquitos, hence clean the floors around the compost tub after adding leachate.

3.5 Composting Process – Sprinkling of leachate

- The floor of each tub shall be sloped to one side and have a drain point with jalli to collect leachate
- Leachate drain points from each tub shall be connected to underground pipes to form a leachate drainage network and connected to a chamber for safe collection.
- Leachate can be used as inoculum and can be sprinkled on the waste in tubs.

"Leachate" is the liquid that drips out from the wet waste and gets collected into a leachate collection tank. It is rich in bacterial consortium.

3.5 Composting process – Removal of compost

Say: Once a tub has received waste thrice (for example, on 1st, 8th and 15th day) as per the sequence, it should be kept for 27 days of retention period. Meaning no new waste should be put into it after 15th day and it should allow to decompose till 42nd days.

On 42nd day, the waste should have been transformed into black colored compost.

The matured compost shall be removed from the tub.

3.5 Composting Process – Removal of compost

After 42 days, remove the compost from the tub

Day	Train-1						
	Tub-1	Tub-2	Tub-3	Tub-4	Tub-5	Tub-6	Tub-7
15	IN						
16		IN					
17			IN				
18				IN			
19					IN		
20						IN	
21							IN
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43	OUT						
		OUT					
			OUT				
				OUT			
					OUT		
						OUT	
							OUT

Retention period of 27 days
(without adding any waste into tub)

3.5 Composting process – Post maturity of compost

Say: At the end of 42 days, if you are not sure regarding the compost maturity then you can conduct a compost maturity test, which is know as 'Stink bag test'.

To perform a stink bag test, take a plastic bag and place a compost with 60% water content in it and seal it. Keep it for 24-48 hours at room temperature (30°–35°C).

If foul odour is produced when it is opened at the end of 24-48 hours, then it means that the compost has not been matured yet and needs to undergo for further decomposition.

It can happen when the weather is moist and cold.

Sieve the compost after drying it under the sun for 7 days using the sieving machine to get uniform sized compost. The residues from sieving to be placed back into the compost tub along with fresh wet waste.

3.5 Composting process – Post maturity of compost

Stink bag test

- Take a plastic bag and place compost with 60% water content
- Keep for 24-48 Hours at room temperature (30°–35°C)
- If foul odour is released when bag is opened, then it means compost is not matured and needs further drying

Sieve the compost for uniform size & put the rejects from sieve back into the compost tub

Leave the sieved compost for 7 days for sun drying before quality check

Overall Cycle of Preparation of Compost

Summarize the entire composting process using the slide/ showing the video.

Overall cycle of preparation of compost

3.6 Compost quality check and testing

Say: Once the compost is prepared the next step is to check its quality.

Ask: Why quality check and testing of compost is required?

Say: As per the solid waste management rules, 2016 the compost quality should match the standards prescribed under Fertilizer Control Order (FCO).

It is suggested to test the derived final product in government approved laboratories before further distribution. The wealth centres should get it tested and approved as per the standards in different laboratories.

Wealth Centre In-charge and Nodal Officer of ULB is responsible for quality check of compost.

3.6 Compost quality check and testing

- Compost quality should match the standards prescribed under Fertilizer Control Order (FCO)
- Testing of the compost should be conducted in nationally designated laboratory/ testing centres at least once in a month
- Wealth Centre In-charge and Nodal Officer of ULB is responsible for quality check of compost

SPECIFICATION OF COMPOST QUALITY PRESCRIBED UNDER THE SOLID WASTE MANAGEMENT RULES, 2016 [SCHEDULE-II]		
Parameters	**Organic Compost (FCO 2009)**	**Phosphate Rich Compost (FCO 2013)**
Arsenic (mg/kg)	10	10
Cadmium (mg/kg)	5	5
Chromium (mg/kg)	50	50
Copper (mg/kg)	300	300
Led (mg/kg)	100	100
Mercury (mg/kg)	0.15	0.15
Nickle (mg/kg)	50	50
Zinc (mg/kg)	1000	1000
C/N ratio	<20	Less than 20:1
pH	6.5 – 7.5	(1:5 solution) Maximum 6.7
Max. humidity (% by weight)	15 – 25	25
Bulk Density (g/cu.cm.)	<1	Less than 1.6
Min. total organic carbon (% by weight)	12	7.9
Min. total nitrogen(N) (% by weight)	0.8	0.4
Min. total phosphate(P2o5) (% by weight)	0.4	10.4
Min. total potassium(K2O) (% by weight)	0.4	-
Colour	Dark Brown to Black	-
Odour	Absence of the stench	-
Particle size	Min. 90% material should pass through 4 mm IS sieve	Min. 90% material should pass through 4 mm IS sieve
No more conductivity than (as per dsm-1)	4	8.2

3.7 Packaging of ‘Mo Khata’

Say: The Government of Odisha has decided to brand the compost generated in the MCCs as ‘Mo Khata’.

The ULB is responsible for providing bags for the packaging of Mo Khata. The Wealth Centre in-charge would be responsible for packaging, selling and supplying of compost

Wealth Centre In-charge should ensure ‘Mo Khata’ is packed in various sizes of bags (1 kg, 5 kg, 25 kg) for different consumers.

Avoid use of plastic bags for packaging of ‘Mo Khata’.

The bags should be sealed properly using sealing machine to maintain the quality of product.

3.7 Packaging of ‘Mo Khata’

- Brand the compost generated in MCCs as **“Mo Khata”**
- ULB will provide bags for packaging of ‘Mo Khata’
- Wealth Centre In-charge should ensure ‘Mo Khata’ is packed in various sizes of bags (1 kg, 5 kg, 25 kg) for different consumers
- Avoid use of plastic bags for packaging of ‘Mo Khata’

Different sizes of bags for ‘Mo Khata’

3.8 Inventory and Sale of ‘Mo Khata’

Say: The Wealth Centre In-Charge shall enter production and sale of Mo Khata in Ama Sahara App

The resources generated from the sale of “Mo Khata” shall be deposited in the Corpus Fund of the wealth centre and shall be utilized to meet operation and maintenance cost of the “wealth centre”.

Money Receipts should be issued for receipt of the amount towards sale of “Mo Khata” and the amount so collected should be deposited in the separate Savings Bank Account of the “Wealth Centres”.

3.8 Inventory and Sale of ‘Mo Khata’

- Maintain the stock register and record of sale of ‘Mo Khata’ produced on ‘Ama Sahar’ app on daily basis
- Issue receipts towards the sale of ‘Mo Khata’
- Supply ‘Mo Khata’ to ULB outlets
- Deposit money collected in the savings bank account (Corpus fund) of the wealth centre

- Resources generated from the sale of “Mo Khata” shall be utilized to meet O&M cost of the “Wealth Centre”.

3.9 Use of ‘Mo Khata’

Explain each use in detail based on the details given.

Complementary supply to households: a complementary circulation of “Mo Khata” (a token quantity) to each household in the Service Area of the MCC concerned should be made, who have handed over waste to the ULB, to convey them the message that The “Waste” was not a “waste” it is “Wealth in disguise”.

Use in Municipal parks and garden: ULB should use “Mo Khata” in the plantation made in places under its administrative control such as parks, plantations made in the road dividers and other places.

Give as Memento: It can be presented as mementos in different competitions, awareness campaign, felicitation, Orientation meetings etc. as it carries a significant message on Environmental Protection, care for the waste, and in promoting the use of organic compost. Behavioral change in exponential form can take place through this activity.

Sale at outlets: ULBs may through the members of the Mission Shakti Groups/ Transgender Groups or on their own open outlets in suitable places and make available “Mo Khata” for purchase by people at the aforesaid price.

3.9 Use of ‘Mo Khata’

Complementary supply to households

Use in Municipal parks and garden

Give as Memento

Sale at outlets

3.9 Common Issues and corrective measures

Say: we've learned about operation and maintenance of micro composting centre as per standard operating procedure but in practice some different observation we've noticed, lets have a look on Examples from field observations in a pictorial form

Common Issues and corrective measures

Examples from field observations

Small changes lead to big results, which in turn improves overall performance

Common issues at MCC

- Improper slope on the floor of the tub prevent free flow of liquid towards the leachate hole
- Leakage in compost tubs causing leakage of leachate
- Absence/ improper strainer at the leachate hole
- Unwanted flies and pests in wealth centre
- Colour of the compost inside the tubs turning into yellow
- Foul odours from composting tubs
- Foul odours released from leachate
- Choke in Leachate chamber, connecting drains
- Insects on the floor

Space created for Wet Waste Segregation

Before

Adequate space for waste segregation

After

"**Adequate space for waste segregation"** helps Swachha karmis in performing their duties efficiently

Tub correction to avoid storage of excess leachate in tub

Before

Leachate collected properly

After

Excess store of leachate create anaerobic condition in the tubs

Slopping correction in compost tusb

Before

Slope Corrected

After

Sloped floor of tub to one side and have a drain point with jalli will help to collect leachate properly

Correction of vent pipes

Before

Level of vent pipes raised up.

After

Vent correction will help to check leakage of leachate and improve ventilation

Unblock Vent holes filled with leachate

Before

Vent pipe has no blockage

After

Blockage of vent pipe affects ventilation and aeration process

Prevent Unwanted Flies and Pests

Before

Unwanted Maggots controlled

After

Maggots created due to excess and leakage of leachate

Clear Drainage Channel

Before

Drain repaired, water flows easily

After

Drainage line is corrected which enables drain out of used water

Do not overload Tubs (not more than three time)

Before

Three time loading

After

Overload will create difficulties in turning the waste up and down for aeration

Control Flies

Before

Flies nuisance controlled

After

Flies nuisance due to absence of flytraps

Installation of flytrap

Before

Fly traps installed

After

Flytraps help in controlling the fly nuisance inside the wealth centre

Do not leave Leachate Chamber uncovered

Before

Uncovered Leachate chamber coved

After

Uncovered leachate chamber may cause unwanted pest and flies and foul odour

Construction of Leachate Chamber/Tank

Before

Leachate collection tank constructed

After

Proper containment of leachate will prevent the risk of groundwater contamination that is not caught by collection systems is determined by the following factor

Correction of holes inside the tubs

Before

Leackage repaired

After

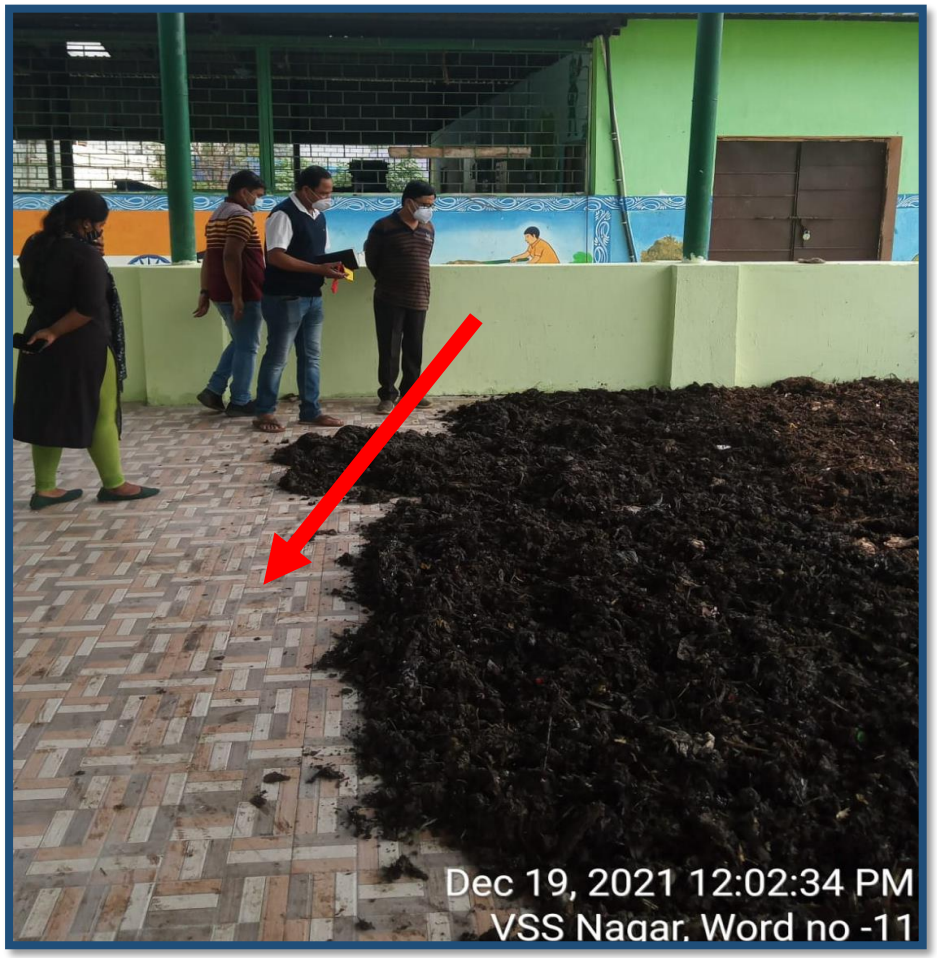
The leakages repaired using bond/ white cement will help check leakage of leachate

Construction of Compost Drying Yard for proper stabilisation

Before

Compost dried in drying yard

After



Now the compost is safely kept, stabilised and dried in drying yard

Tiles on inside wall of Drying Yard

Before

Tiles set inside wall of drying yard

After

Tiles on the wall will save it from the damage caused by moisture of compost

Cleaning of MCC by using Jet spray machine

Before

Cleaning through jetting machine

After

Now the work place remains clean and dust-free

Clean Wealth Centre surrounding

Before

Surroundings cleaned

After

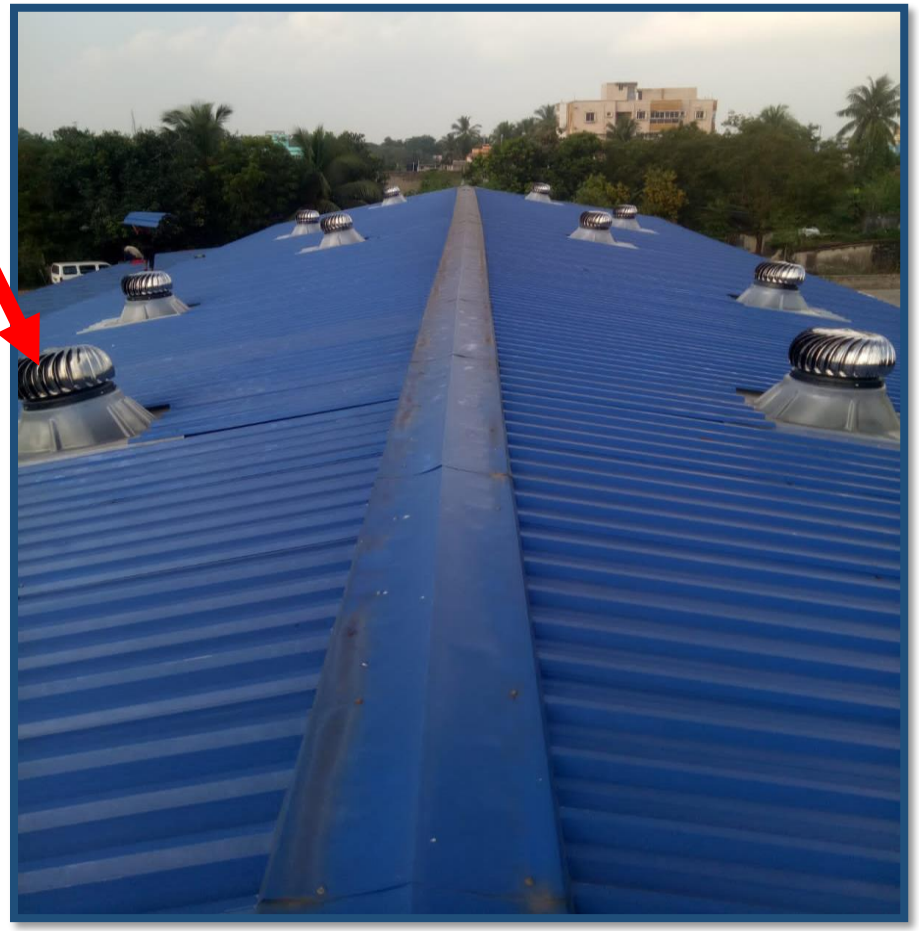
Clean surrounding provides a better environment

Installation of Turbo Fan

Before

Turbo fans installed

After



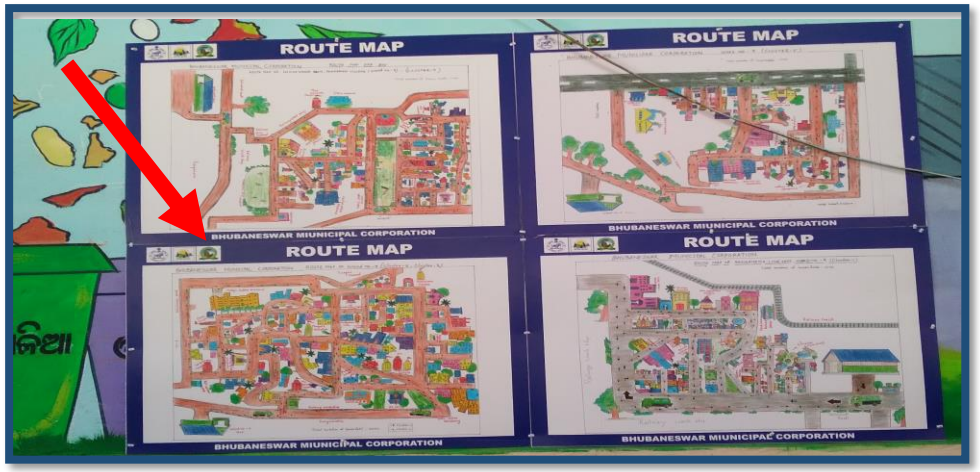
Proper ventilation helps drying and controls foul Odour

Affixing of Route Map at WC and on LCV/BOV

Before

Route maps affixed in LCV and wall of MCC

After



The route maps will help in rationalising the route

Performance level of the MCC

Sl. No	Performance Indicators		Remarks
1	What time the facility opens?	--(AM)	
2	What time the facility close?	--(PM)	
3	Percentage of days the compost plant was not operational	----(%)	
4	Quantity of waste received	----(kg)	
5	Compost production (kg)	----(kg)	
6	Capacity utilization of the MCC in percentage	----TPD	
7	Quantity of compost sold	----(kg)	
8	Revenue generated from selling of compost	----(INR)	
9	Expenditure on the operations & maintenance	----(INR)	
10	Digital weigh bridge down time (in days) in percentage.	----(Days)	
11	Shredder downtime (in days) in percentage	----(Days)	
12	Sieving machine downtime (in days) in percentage	----(Days)	
13	Flytrap downtime (in days) in percentage	----(Days)	
14	Percentage of absenteeism of human resources	----(%)	

Safety measures at Wealth Center

Here, the trainer will explain about the usage of PPE as a precaution at the Wealth Centre based on the type of the hazard.

Safety measures at Wealth Center

Safety measures at Wealth Centre

Say: While working at the MCC, there is a possibility of getting minor cuts and injuries due to presence of broken glass, sharps, needles which may lead to septic wounds and tetanus or bacterial infections. Hence, we should use Gloves for our safety.

There is also a possibility of exposure to gases causing irritation of nose, throat, and lungs, hence usage of Mask is important.

The florescent jacket is also important to wear to keep the worker visible and protect from any incidents.

Also, there is a possibility of bacterial infection due to contaminated waste and cuts and injuries due to presence of broken glass, sharps, needles which may lead to septic wounds and tetanus. To be protected from this shoes are required.

Safety measures at Wealth Centre

- Personal Protective Equipment (PPE)

Mask

Gloves

Fluorescent Jacket

Shoe

Swachha Karmi with PPEs

Source: Urban Management Centre, 2021

First Aid

Say: It is the responsibility of a trainer to ensure that the first aid kit is updated and contains minimum basic requirement of the kit.

Wealth Center in-charge ensure that the first aid kit is updated and contains minimum basic requirement of the kit.

First Aid

- Wealth Center in-charge ensure that the first aid kit is updated and contains minimum basic requirement of the kit (Society, 2016).
- The most basic constituents include:
  - Band-aids
  - Bandages
  - Antiseptic liquid
  - Medical cotton
- Every person working in the WC should know how to use first aid in case of health emergency of any co-worker.
- The emergency contact numbers should be displayed.

Health & Welfare Entitlements of Swachha Karmis

In this session trainer will explain about Health & Welfare Entitlements of Swachha Karmis.

Say: The Government of Odisha will extend their support to the MS-SHG members engaged in Wealth Centre for operation and maintenance of MCC and MRF.

Health & Welfare Entitlements of Swachha Karmis

Entitlements of Swachha Karmis

Say: After understanding about the roles and responsibilities, let's see what are we entitled for.

For a Swachha Karmi, the ULB will ensure monthly incentive, which can be received by you on every 7th date of the month. Apart from the monthly incentive, a Swachha Karmis is also entitled to monthly health check-up and PPE from the ULB.

Apart from the monthly incentive, a Swachha Karmi is also entitled to monthly health check-up and PPE from the ULB.

Entitlement of Swachha Karmis

ULB will ensure:

Swachha Karmi –

1. Monthly Incentive by 7th of every month
2. Monthly Health check-up
3. Personal Protective Equipment

Record maintenance at MCC

Say: As a Wealth Centre In-charge, it is our most important responsibility to maintain records.

Record Maintenance at MCC

Frequency of data entry in ‘Ama Sahara’

Say: Wealth Centre In-charge are responsible for maintaining records of;

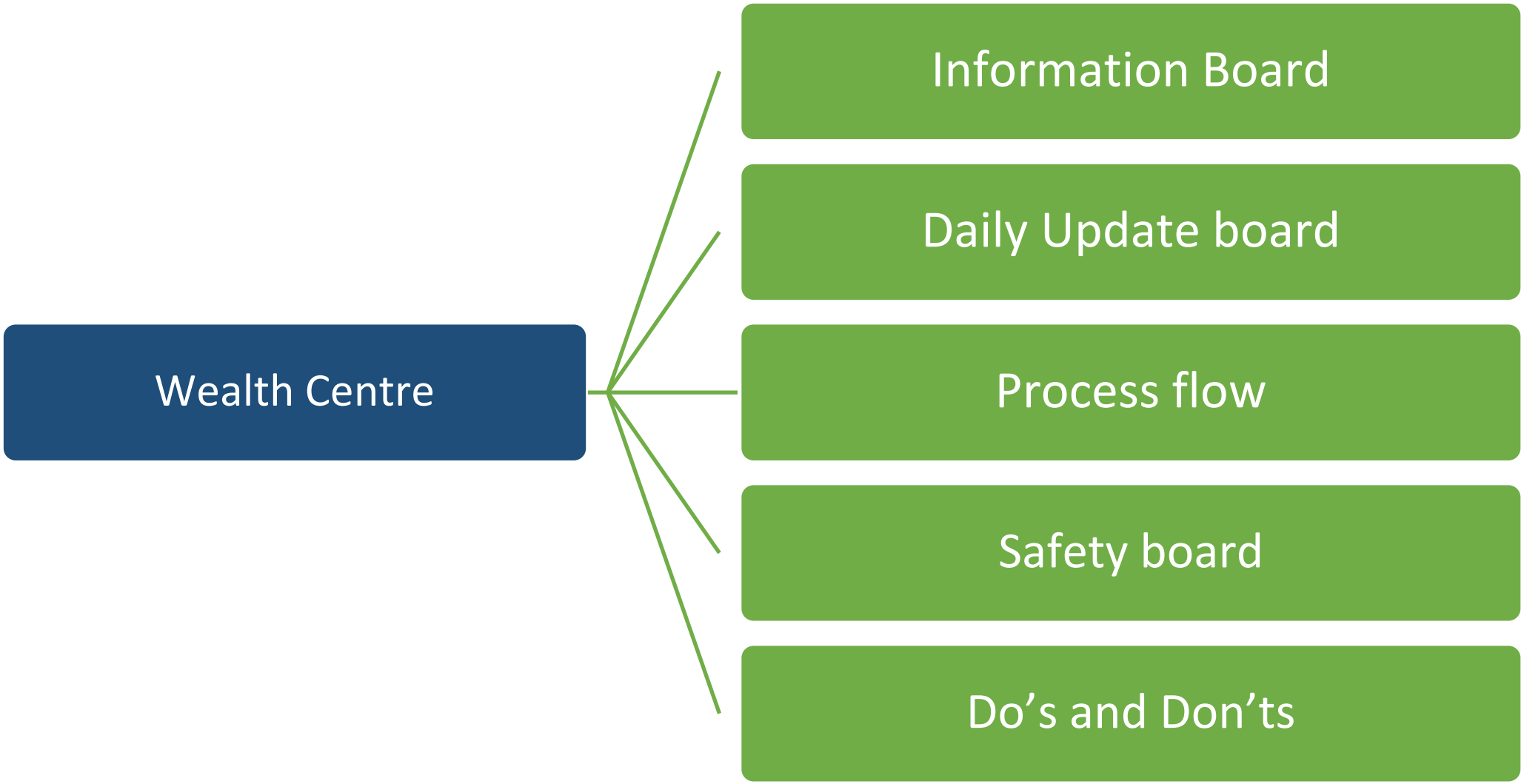
- Waste Received
- Compost Generated
- Compost Sold
- Complimentary Distribution of Compost
- Payment of incentive
- Daily attendance marking
- PPE inspection record
- Monthly meetings record

Explain the frequency of data entry in Ama Sahara App as mentioned in the table

Frequency of data entry in ‘Ama Sahara’

Roles [Types of data entry]	Parameters /Forms and data	Frequency for filling in the forms
Wealth Centre In-charge [MCC MIS Forms]	Waste Received	Daily
	Compost Generated	Weekly
	Compost Sold	on the date of sale
	Complimentary Distribution of Compost	On day of distribution
	Payment of incentive	Monthly
Wealth Centre In-charge/ Swachh karmi [Attendance Marking]	Attendance	Daily

Signage at Wealth Centre



ULB Logo

Technical Support
Urban Management Centre

ସମ୍ପଦ କେନ୍ଦ୍ର (Wealth Centre)
ଅଣୁ ଜୈବଖତ ପ୍ରକ୍ରିୟାକରଣ କେନ୍ଦ୍ର, ----

Daily Update Information Board

DATE	
ଆଜି ଏମସିସିକୁ ଆସିଥିବା ଗାଡିଗୁଡିକର ମୋଟ ଟ୍ରିପ ସଂଖ୍ୟା। TOTAL NO OF COLLECTION VEHICLES TRIP TO MCC TODAY	
ଆଜି ମୋଟ ସଂଗୃହିତ ଓଦା ଅଳିଆର ପରିମାଣ TOTAL WET WASTE RECEIVED TODAY	ମୋଟ କି.ଗ୍ରା। In Kgs
ଆଜି ଉତ୍ପାଦିତ ହୋଇଥିବା 'ମୋ ଖତ'ର ପରିମାଣ TOTAL COMPOST GENERATED TODAY:	ମୋଟ କି.ଗ୍ରା। In Kgs
ଆଜି ବିକ୍ରି ହୋଇଥିବା 'ମୋ ଖତ'ର ପରିମାଣ TOTAL COMPOST SOLD TODAY:	ଟଙ୍କା। INR

Process Flow-ଏମ.ସି.ସିରେ ଖତ ପ୍ରକ୍ରିୟାକରଣ କ୍ରମର ସାଇନେଜ୍

Fire Safety

Say: It is the responsibility of a Wealth Centre In-charge to ensure the fire safety in the wealth centre taking all necessary precautions.

The wet waste sometimes due to methane emissions, can get fire, when there is very high temperature during summer.

The presence of these materials involves the risk of fire hazards at wealth centres. Hence, the fire safety measures should also be taken at Wealth Centres to tackle fire emergencies.

The emergency contact number for fire emergency '101' should also be known by the workers at the WC.

Apart from this, the wealth center is suggested to be equipped with a suitable fire extinguisher to be used in emergency and every staff at the WC should know how to use it.

ସୁରକ୍ଷା ସମ୍ବନ୍ଧୀୟ ସୂଚନା ବୋର୍ଡ - ଅଗ୍ନି ସୁରକ୍ଷା

ଅଗ୍ନି ସୁରକ୍ଷା

୧. ଯେଉଁଠି ଅଛନ୍ତି, ସେଠାରେ ରୁହନ୍ତୁ

୧. ଅନ୍ୟଙ୍କୁ ଜଣାନ୍ତୁ

୨. ନିରାପଦ ସ୍ଥାନକୁ ଚାଲି ଯାଆନ୍ତୁ

୩ . ୧୧୨ ଡାଏଲ୍ କରି ଅଗ୍ନିଶମ ବାହିନୀକୁ କଲ୍ କରନ୍ତୁ

* ଆବଶ୍ୟକତା ଅନୁଯାୟୀ ପାଣି, ବାଲି କିମ୍ବା ଅଗ୍ନି ନିର୍ବାପକ ଯନ୍ତ୍ର ବ୍ୟବହାର କରନ୍ତୁ

Dos and Don’ts at Wealth Centre

The trainer will explain what precautions to be taken while working at Wealth Centre by the point given as Dos and Don’ts as mentioned in the slide.

Technical support

Urban Management Centre

Capacity Building Program for Mission Shakti SHGs Engaged in Sanitation Based Livelihoods

ସମ୍ପଦ କେନ୍ଦ୍ର ରେ କ'ଣ କରିବା ଏବଂ କ'ଣ କରିବା ନାହିଁ

କ'ଣ କରନ୍ତୁ

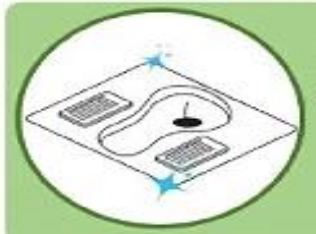
ଏବଂ

କ'ଣ କରନ୍ତୁ ନାହିଁ

ବ୍ୟକ୍ତିଗତ ପ୍ରତିରକ୍ଷା ଉପକରଣ (PPE) ର ବ୍ୟବହାର କରନ୍ତୁ

ଯନ୍ତ୍ରପାତିର ମାସିକ ଯାଞ୍ଚ ଏବଂ ରକ୍ଷଣାବେକ୍ଷଣ କରନ୍ତୁ

ବ୍ୟବହାର ପରେ ସମସ୍ତ ଯନ୍ତ୍ରପାତି ସଫା କରନ୍ତୁ



ଶୌଚାଳୟର ସ୍ୱଚ୍ଛତା ସୁନିଶ୍ଚିତ କରନ୍ତୁ

ଆଲୋକ ଏବଂ ମୁକ୍ତ ବାୟୁ ଚଳାଚଳ ସୁନିଶ୍ଚିତ କରନ୍ତୁ

ଜରୁରୀକାଳୀନ ପରିସ୍ଥିତି ପାଇଁ ପ୍ରାଥମିକ ଚିକିତ୍ସା କିଟ୍ ରଖନ୍ତୁ

ଅଗ୍ନି ନିର୍ବାପକ ଯନ୍ତ୍ରକୁ ବ୍ୟବହାର ପାଇଁ ସୁବିଧା ସ୍ଥାନ ରେ ରଖନ୍ତୁ

କାମ କଲାବେଳେ ଯନ୍ତ୍ରପାତି ପାଖକୁ ଢିଲା ପୋଷାକ ପିନ୍ଧି ଯାଆନ୍ତୁ ନାହିଁ

ଯନ୍ତ୍ରପାତିର ଚାଲିଥା ଅବସ୍ଥାରେ ତା ନିକଟରେ ହାତ ରଖନ୍ତୁ ନାହିଁ

ଗର୍ଭବତୀ ମହିଳାମାନଙ୍କୁ ପରିସର ଭିତରକୁ ଅନୁମତି ଦିଅନ୍ତୁ ନାହିଁ

୧୪ ବର୍ଷରୁ କମ୍ ପିଲାମାନଙ୍କୁ ପରିସର ଭିତରେ କାମ କରାନ୍ତୁ ନାହିଁ

ପୁରୁଷ ଏବଂ ମହିଳା ଭିତରେ ଭେଦଭାବ କରନ୍ତୁ ନାହିଁ

ପରିସର ଭିତରେ ପଶୁଙ୍କୁ ଅନୁମତି ଦିଅନ୍ତୁ ନାହିଁ

ଜଳ ଏବଂ ବିଦ୍ୟୁତ ନଷ୍ଟ କରନ୍ତୁ ନାହିଁ

ଯାହା ଦ୍ୱାରା ନିଆଁ ଲାଗିବାର ସମ୍ଭାବନା ଥାଏ ସେ ସବୁ ପରିସର ଭିତରେ ବ୍ୟବହାର କରନ୍ତୁ ନାହିଁ

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Human resource at Wealth Centre

Say: Human resource with appropriate skills and number is required for efficient operationalization of Wealth Centre.

The local mission shakti group/ ALF/ CLF or transgender group should nominate suitable members and deploy them for wet waste processing activity at the Wealth Centre.

Human Resource at Wealth Centre

Responsibilities of Wealth Centre In-charge

Say: Each Wealth Centre, will have one Wealth Centre In-charge stationed.

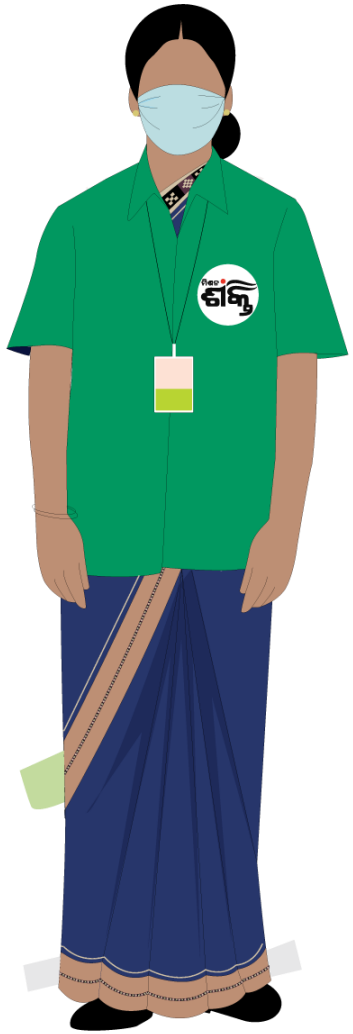
The Wealth Centre will have a Wealth Centre In-charge stationed to co-ordinate managerial activities to ensure overall performance of the Wealth Centre.

He/she will be responsible for monitoring the performance of Swachha Karmis in processing waste.

The Wealth Centre In-charge must ensure smooth operations of machineries at Wealth Centre.

The record up-keeping, timely reporting of issues to concerned authority is the responsibility of a Wealth Centre In-charge.

Responsibilities of Wealth Centre In-charge



1 Wealth Centre requires,

1 Wealth Centre In-charge

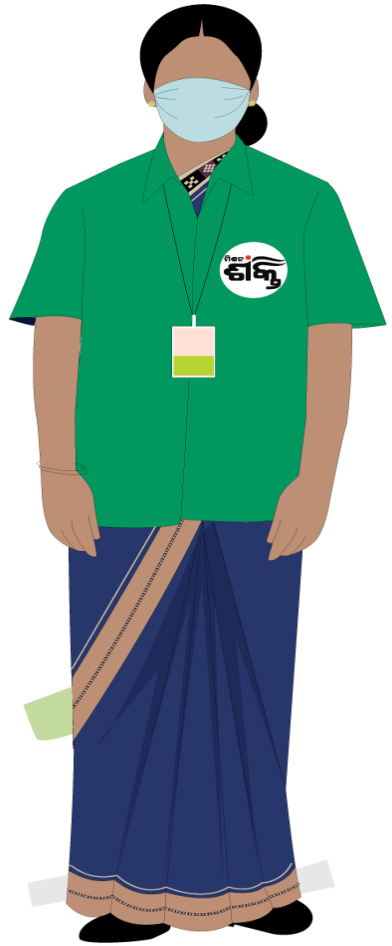
To monitor performance of Swachha Karmis in processing of waste	To coordinate managerial activities of the MCC	To ensure smooth operation of machineries at MCC
To ensure usage of PPE by workforce	To maintain all records and ensure timely reporting of any issues	To monitor overall plant and bill voucher issue.

ମୁଁ ଏସବୁ ପ୍ରତିଦିନ କରିବି

ULB

ମୁଁ "ସମ୍ପଦ କେନ୍ଦ୍ରର ଇନଚାର୍ଜ "

ଏ ସବୁ ହେଉଛି ମୋର ଦାୟିତ୍



ଏମ. ସି. ସି.ରେ ନିମ୍ନଲିଖିତ କାର୍ଯ୍ୟର ତଦାରଖ କରିବି

ଆସୁଥିବା ଓଦା ଅଳିଆର ଓଜନ ଏବଂ ରେକର୍ଡ

ଓଦା ଅଳିଆର ପ୍ରକ୍ରିୟାକରଣ

ନିତ୍ୟ ବ୍ୟବହାର୍ଯ୍ୟ ସାମଗ୍ରୀର ଉପଲବ୍ଧତା

ମୋ ଖତର ପ୍ୟାକେଜିଂ ଏବଂ ବିକ୍ରୟ

ଏସବୁ ମୁଁ ସୁନିଶ୍ଚିତ କରାଇବି

ବ୍ୟକ୍ତିଗତ ସୁରକ୍ଷା ଉପକରଣ (ପି.ପି.ଇ)

ଯନ୍ତ୍ରର ନିୟମିତ ରକ୍ଷଣାବେକ୍ଷଣ

ସମ୍ପଦ କେନ୍ଦ୍ର ସଫା ସୁତୁରା ପ୍ରତି ଧ୍ୟାନ

ସବୁ ଜର୍ମାଙ୍ଗ ଉପସ୍ଥାନ

ବିବାଦର ସମାଧାନ

ଦୈନିକ ରେକର୍ଡ ପରିଚାଳନା

ଆମ ସହର ଆପ୍‌ରେ ଦୈନିକ ରିପୋର୍ଟ

ଯଦି କୌଣସି ମେସିନ ରାଜିଯାଏ କିମ୍ବା ତ୍ରୁଟି ଦେଖାଯାଏ, ତେବେ ସେବା ପ୍ରଦାନକାରୀ ଜିମ୍ବା ଯୌରଙ୍ଗସ୍ଥାକୁ ଜଣେଇବି

ଏମ.ଆର.ଏଫ୍.ରେ ନିମ୍ନଲିଖିତ କାର୍ଯ୍ୟର ତଦାରଖ କରିବି

ଅଳିଆର ବର୍ଗ ଅନୁସାରେ ବାଛିବା

ବେଲିଙ୍ଗ ମେସିନରେ ଚାପି ବିତା ବାନ୍ଧିବା

ପୁନଃ ବ୍ୟବହାର ଯୋଗ୍ୟ (ରିସାଇକେଲେବଲ୍) ଅଳିଆଗୁଡ଼ିକୁ ସାଜୁତିପ୍ରାପ୍ତ କ୍ରେତା ଜିମ୍ବା ଜବାତି ବାଲାଙ୍କୁ ବିକ୍ରି କରିବି

ପୁନଃ ବ୍ୟବହାର ଅଯୋଗ୍ୟ (ନନ ରିସାଇକେଲେବଲ୍) ଅଳିଆଗୁଡ଼ିକୁ ପୌର ସଂସ୍ଥା ଦ୍ୱାରା ବଛା ଜାଇଥିବା କ୍ରେତାଙ୍କୁ ବିକ୍ରି କରିବି

Responsibilities of Swachha Karmis at MCC

Say: The number of Swachha Karmis for operationalizing the MCC will differ based on the capacity of the plant.

The Swachha Karmis deployed at MCC will be responsible for performing activities in receiving, processing wet waste and manage the sales of produced compost ("Mo Khata") under the guidance and supervision of Wealth Centre In-charge.

Responsibilities of Swachha Karmis at MCC

Receiving wet waste	Preparing EM solutionProcessing wet waste
Packaging of compost	To manage the sales of “Mo Khata” under the direction of Wealth Centre In-charge

Responsibilities of Swachha Karmi

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Ensure usage of Personal Protective Equipment (PPE)

Say: The Wealth centre In-charge is responsible to ensure that all the Swachha Karmis are wearing appropriate Personal Protective Equipment (PPE) such as gloves, masks, shoes that cover the feet and florescent jacket as provided.

The ULB is responsible for providing the PPEs and for timely replacement.

In case the Swachha Karmis need to replace PPE, the Wealth centre In-charge should arrange it them from the ULB.

Ensure usage of Personal Protective Equipment (PPE)

- Wealth centre In-charge should ensure that all Swachha Karmis are wearing all four PPEs during work

- ULB is responsible for providing and replacing PPE.

Mask

Gloves

Florescent vest

Shoes

Swachha Karmis wearing PPE

Source: Urban Management Centre, 2021

Role of ULBs

Here, the trainer will explain about the roles and responsibilities of Urban Local Body.

Say: Now we will discuss about the supports provided by ULB.

Role of ULBs

ULB will ensure:

Say: The ULB will ensure provision of identity cards for all Swachha Karmis.

It will ensure that adequate number of Swachha Karmis are appointed to work along with us.

The ULB will have to ensure deployment of adequate number of waste collection vehicles as pe the requirement for efficient waste collection.

ULB will be responsible to release regular and timely payment of incentives for Swachha Karmis engaged at Wealth Center

ULB will have to assure provision of PPE kits for all those associated in the management of solid waste.

In case, there is requirement of training for Swachha Karmis or other staff, ULB will have to arrange it.

And lastly, if there is any disputes within the sanitation staff would be resolved by ULB.

ULB will ensure:

Identity cards to you and Swachha Karmis

Engagement of adequate Swachha Karmis

Deployment of adequate waste collection vehicles

Regular and timely payment of incentives

PPEs and safety kits to all Swachha Karmis

Training to you and Swachha Karmis

Resolve disputes if any

Source: Pinclipart.com, 123rf.com as on 25.11.21; Urban Management Centre, 2021

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Fostering Excellence in Governance

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