

Training Module on Service Contract Agreements for Solid Waste Management in Gram Panchayats

Actionable Learning Modules
for Gram Panchayat Functionaries



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Foreword

Waste is a mounting problem not only in Corporations and Municipalities, but also in rural areas. The Solid Waste Management Rules amended in 2016 has brought in Gram Panchayats also in its purview. It means whoever generates waste – be it households, institutions, or marketplaces – at the end of the day all such waste fall on the lap of Gram Panchayats to clean up. This necessitates Gram Panchayats to put in place a waste management system. In other words, the Gram Panchayats must be equipped to plan, organise, and implement waste management as a regular practice – and not as a project to place dust-bins in street corners without a system in place for collection, and scientific treatment. Without a functioning waste management system in place, it doesn't augur well blaming the households of being irresponsible.

Solid waste management is a vital component under the Swachh Bharat Mission (SBM-G) Phase – II. Under SBM-G funds are made available to Gram Panchayats for setting up solid waste management units at GP level, and Plastic Waste Management Units at cluster level. All that is required is the Gram Panchayats need to get prepared either to carry it out themselves or to get into a service contract agreement with some private waste management service providers. Certain responsibilities of the Gram Panchayats such as uninterrupted drinking water supply, or village cleanliness and waste management can be outsourced through service contract agreements with some professional agencies that specialise in such service delivery. This is an alternative thinking to the way Gram Panchayats have been working so far. It's an idea, whose time has come for which our Gram Panchayats have to be equipped.

Gram Panchayats in India require to be systematically trained in order to engage in service contracts with professional agencies and deliver effective water and sanitation services at the grassroots level. This training module has been prepared bearing in mind operationalisation of such innovative ideas. I appreciate the efforts of Dr R Ramesh, Associate Professor, CRI and the CPR team for their contributions in preparing this training module. I am sure this is going to be useful to SIRDs, ETCs and to many more grassroots level trainers. To enable better reach, this has to be quickly translated into major regional languages as well. I must thank the Secretary MoPR, and congratulate the Joint Secretaries at the MoPR for their support in this important task.

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Abbreviations

ANM	:	Auxiliary nurse and midwife
ASHA	:	Accredited Social Health Activist
BDO	:	Block Development Officer
CPCB	:	Central Pollution Control Board
GD	:	Group Discussion
GoI	:	Government of India
GP	:	Gram Panchayat
HH	:	Household
FAQ	:	Frequently Asked Questions
IEC	:	Information, Education and Communication
ICDS	:	Integrated Child Development Services
IHHL	:	Individual Household Latrine
JJM	:	Jal Jeevan Mission
LPCD	:	Litre per capital per day
PH	:	Public Health
PHED	:	Public Health Engineering Department
PPM	:	Parts per million
PPE	:	Personal Protective Equipment
PR	:	Panchayt Raj
PWS	:	Public water system
MGNREGS	:	Mahatma Gandhi National Rural Employment Guarantee Scheme
MoRD	:	Ministry of Rural Development
MoPR	:	Ministry of Panchayati Raj
MRF	:	Material Recovery Facility
NIRD&PR	:	National Institute of Rural Development and Panchayati Raj
O & M	:	Operation and Maintenance
ODF	:	Open Defecation Free
OT test	:	Orthotolidine test
RDF	:	Refuse Derived Fuel

RDD	:	Rural Development Department
RLBs	:	Rural Local Bodies
RWS	:	Rural Water Supply
SLWM	:	Solid and Liquid Waste Management
SLRM	:	Solid and Liquid Resource Management
SWM	:	Solid Waste Management
SBCC	:	Social and Behaviour Change Communication
SPCB	:	State Pollution Control Board
SBM-G	:	Swachh Bharat Mission-Gramin
SLB	:	Service Level Bench Marks
ULBs	:	Urban Local Bodies
VWSC	:	Village Water and Sanitation Committee
WASH	:	Water, Sanitation and Hygiene
WC	:	Western closet
WTP	:	Water treatment plant

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PART – 1

AN OVERVIEW OF THIS MODULE

Welcome

Scientific management of solid waste is an integral part of sanitation. In fact, it is a scheduled duty of every Gram Panchayat (GP) to put in place a system for solid waste management at GP level or at cluster of GPs. This training module has been developed bearing in view the need for training the Gram Panchayat functionaries, and other community level resource persons / volunteers on options or models available for managing waste at GP level.

The predominant focus of this training module is on managing waste through service contract agreements with agencies specialising in waste management. Therefore, the coverage here is more on elements of contract management such as how a GP can enter into contracts with third parties; defining the scope of work; assessing the financial implications and other terms and conditions so as to ensure operational sustainability.

Other important elements such as IEC / SBCC, training the community, and technologies for waste management are very marginally touched upon – or in a way, deliberately kept outside the scope of this module for two distinct reasons. One is that the purpose of this module is to train GP functionaries on service contract agreements, which is a new domain for GPs to get into; secondly, training modules on waste segregation, IEC for community preparation, technologies for waste management etc. are already available.

What is the purpose of this module?

The prime purpose of this training module is to put together ideas, simple methods and techniques that work towards addressing issues of indiscriminate throwing of household / kitchen waste in street corners, and to strengthen the hands of the GPs by providing them with service level bench marks; service contract agreements; monitoring indicators etc. so that they can engage professional third parties to address such issues. Day-1 focuses on waste management; and Day-2 focuses on service contracts.

The specific objectives are:

- To introduce to the local body leaders, what a waste management system entails
- To put across to the local body leaders the service bench marks, management models, and service contract options available for assigning such works to professional agencies
- To hand them with model service contract agreements, which they can customise to suit local situations and conditions

How has this been designed?

This package is a trainer's guide with a plan of executing 2-day training on solid waste management in ten sessions. Thus, it has (i) contents to be covered in a 2-day training; (ii) session outline, and discussion points at every session; and (iii) additional resources that a grassroots level trainer should be familiar with before launching a training programme. The fundamental purpose of this training is familiarising the Gram Panchayat functionaries with the ways to enter into service contracts with third parties / Institution Support Agencies (ISAs) in order to put in place a waste management system. However, without the knowledge of what a 'waste management system' entails, it will be jumping the gun to get into a signing service contracts with a third party agencies.

Therefore, this module has been designed keeping in view, on Day -1 we introduce what a waste management system entails; and on Day-2 we cover aspects on service level benchmarks, various types of contract agreements, indicators to monitor progress etc.

This training module assumes that the local body leaders who come to attend this training have already undergone training on Panchayati Raj Act and have the basic understanding of Panchayati Raj System in their respective states.

Target Group and Size of Batch

The target group for this training is leaders of local self-governments such as Gram Panchayat Presidents, vice-presidents, and ward members. It is possible community level resource persons, local volunteers, SHGs and prospective ISAs / NGOs with professional understanding of waste

management can also be involved. Regarding the size of batch, it can be thirty participants from 10 GPs if this is carried out as In-person training; and we can have nearly 100 participants in the case of online programmes.

What is the duration of the training?

The course is designed for '10 hours duration' including group discussion and plenary presentations. This is to be covered in two days at the rate of five sessions per day. It is designed to give an overall understanding of waste management; and the nuances involved in getting into a service contract agreement with a private waste management service provider / professional NGO.

What is the training methodology?

This training module contains ten sessions to be completed in two days. The PowerPoint slides provided along with this module are intended to be used for active lectures (contrast to passive lectures). Each active lecture session shall run for 45 minutes followed by 15 minutes discussion before we move on to the next session. During the training there will be PowerPoint slides run, videos played, and sample formats shared with the participants.

By design and methodology, what makes this training 'actionable'? As the training dictum goes: People remember 20% of what they hear; 40% of what they hear and see; and 80 per cent of what they discover by themselves, this calls for a change in the way of teaching, from typical lecturing to a more participatory mode. The participatory approach to training is based on the premise that people learn more effectively when they are presented with activities which take into account their knowledge and experience and which meet their practical needs or help solve a problem communities are confronted with.

In line with this, on day - 2, it is planned to have a group discussion, and a plenary presentation. The purpose of this group discussion is to provide the participants with actual copies of service contract agreements, and ask them to customise it to their local requirements. This will actually serve as an acid test for what the participants learnt during the interactive lecture sessions. This ignites their critical faculties to work so as to recollect the

knowledge they gained during the training, and apply it for a practical purpose. Thus, the last two sessions (Session 9 & 10 on day-2) would be the master key to open application mind-set.

Online Training or In-Person?

This training module is prepared during covid-19 pandemic. Yet, it keeps in view that things will become normal, and we shall all get back to In-person mode of training very soon. However, most of these activities (including group discussion) is possible in online mode as well. Some of the activities suggested here, such as fun games for 'Getting to Know Each Other' may have to be modified depending on if we do the training in online mode or In-person.

Why Contract out?

Out sourcing service through a service contract agreement has many advantages for GPs. Some of them are: (i) professionals can be put to carry out such tasks; (ii) the GPs will have enough time to focus on other priority issues rather than allowing a few areas of development drain away the time; (iii) GPs can focus on development administration rather than getting into micro-managing things. However, this training module is suggestive in its approach, rather than being rigidly prescriptive. This is because if some GPs considered taking up managing waste on their own - rather than contracting it out - they are empowered to decide so. Thus, this option is also open. In order to facilitate this option, a model by-law for Gram Panchayats is given at the annexure -1, which can help such GPs.

Why is this Package called 'Actionable Learning Module'?

Training and capacity building exercises should always lead to useful social action. It is deliberately called an Actionable Learning module because it is tied to action. The leaders of local self-governments who attend this training should go with ideas and tools to put in place a waste management system. As of now, many GPs have little clarity on waste management because waste management until recently was a subject that ULBs and Municipalities were concerned about. Owing to reasons such as improving standards of living, enhanced mobility and purchasing power of the rural

people, coupled with changing cultural practices the amount of waste generated in rural areas is mounting.

The Solid Waste Management Rules amended in 2016 has brought in GPs also in its purview. Therefore, it's time we build the capacity of the Rural Local Bodies (RLBs) to raise up to the demand and take on the challenge, indeed. This requires ideas that are prudent, and practicable. Thus, this training module intends to be an actionable learning module. At the end of this training, the GPs must go with clarity on various management models and service contract options they can consider for inviting professional waste management agencies to enter in to service contract agreements.

Facilitators Guide

The package has been created with the learner as well as facilitator in mind. With this in view, it is designed also to serve a number of purposes. It provides:

- Session outline and session outcome for each session
- In each session, under 'process' it is explained how the trainer is expected to steer the discussion, and what points s/he must try to drive home in a given session.
- In each session, under 'Technical Notes' we provide the trainer with the knowledge he must have grasped by the time he enters to handle that particular session.
- Discussion points supported by PowerPoint Slides with pictures wherever possible are given
- Resources for elaboration, and videos for the facilitator to view, and to play the same to the participants in order to reinforce learning.
- Model service contract agreements, service level bench marks, and monitoring indicators to gauge if the 'third party' is delivering on the promises they made as deliverables.
- Each module is designed as a standard set of independent unit. This makes the learning easy and assimilation systematic / progressive.

How to be an Effective Facilitator?

A trainer is present to facilitate the process of learning. Here are some hints which could enhance your work in facilitating discussions:

- Everyone should know exactly what the discussion is about, and what is the reason for having it?
- Use questions to stimulate discussion. A good trainer teaches through a series of pointed questions that are grounded.
- For people to get involved in the discussion what you refer to must be based on day-to-day life of people and not something made up or abstract. The discussion should point towards solutions that are practicable or, what some GPs have successfully demonstrated.
- For reinforcement – tell them what you are going to tell them; tell them; and then repeat what you just now told them.
- Keep the discussion focused on the subject (your role may include reminding the group when the discussion strays off the subject or goes into matters not in the session plan.
- Sometimes participants tend to complain of irresponsibility on the part of the stakeholders. You must appreciate his/ her concern, and tactfully direct the discussion towards putting his/her energy for setting things right, rather than complaining.
- Keep track of time (it may be your role to make the group aware of how the discussion is proceeding and when it may be time to move on). Sense of time is very important in training.
- Beware of participants who have a tendency to give pointless lectures. Let the questions and discussions be focussed. And keep in mind that prolonged discussions tend to stray and go off the track. As a result some participants forget what they grasped in the whole session that preceded it.
- Use humour to break tension and boredom.

PART – 2

CONTENTS OF THIS MODULE

DAY	SESSION	SESSION TITLE	SESSION OBJECTIVES	SESSION OUTLINE
ONE	1	Introduction	To create a comfortable learning environment and enable the participants recognize that the training aims at addressing a real challenge in rural areas– i.e. indiscriminate disposal of solid waste.	<ul style="list-style-type: none"> • Registration • Welcome & Getting to know each other • Inauguration • Course Introduction
	2	Understanding Solid Waste in Rural Context	To put across the magnitude of the problem solid waste is, and to convince that mixed up waste is useless garbage; and that segregated waste renders itself for scientific treatment.	<ul style="list-style-type: none"> • Solid Waste: Magnitude of the Problem • Types of Waste in Rural Areas • Why is waste a serious problem? • Vision: ‘Zero Waste Panchayats’
	3	Putting in Place a Waste Management System	To explain how to put in place a waste management system, and describe what does such a system entail; To emphasis the need for enlisting the participation of various stakeholders in SWM, and how to make it happen	<ul style="list-style-type: none"> • Waste Survey, Waste Segregation & Waste Streams • What does Putting in Place a Waste Management System entail? • Logistics Planning and Infrastructure Planning • Community Preparation - IEC
	4	Technical Management	To discuss how to collect, scientifically treat and dispose various types of wastes in an environmentally non-polluting way To introduce especially how to deal with wet waste, dry waste and sanitary waste.	<ul style="list-style-type: none"> • Layers of Segregation • Wet Waste Management • Dry Waste Management • Plastic Waste Management • Sanitary Waste Management

	5	Financial Management	<p>To explain various sources of funds available for setting up solid waste management unit at GP level or at Cluster level;</p> <p>To estimate and analyse the likely expenses to be incurred in O & M of SWM Unit, and the sources of income / funds to be able to meet the O & M expenses for operational sustainability</p>	<ul style="list-style-type: none"> • The Investment Requirements & Government Schemes / funds • Budgeting for Operation and Maintenance • Achieving Operational / Financial Sustainability • The Idea of waste to wealth / financing and the economics
TWO	6	Service Contract Management	<p>To discuss the basics of service contract agreements, bidding, and procedures involved in selection of waste management service providers on contract basis;</p> <p>To put across a range of model contract typologies for engaging professional external agencies for solid waste management at GP level, and how to prepare a bid, and appoint into a service contracts</p>	<ul style="list-style-type: none"> • Basics of Contract Management / Third Party Engagement • Types of Model Contracts Introduced • Provisions for Contract in State PR Acts • Model Contract Typologies for SWM • Guidance for Selection of Contracts • Procedure of Awarding Contract • Customization of Contract Documents to suit local needs • Required licenses, sanctions, permissions and compliances
	7	Professionalization of Services	<p>To define / restate the Service Level Bench Marks (SLBs) for providing waste management services;</p> <p>To describe the required manpower - Skilled and Unskilled - with appropriate training, experience and skill-sets in order to ensure efficient collection, secondary segregation, scientific treatment of waste;</p> <p>To identify the local employment potential of waste management services at local level</p>	<ul style="list-style-type: none"> • Service Level Bench Marks (SLBs) • Collection efficiency, treatment efficiency, and disposal efficiency • Skilled and Unskilled Manpower Requirements

	8	Monitoring Service Delivery	To explain the rationale behind the indicators and methods of measurement so as to inspect and judge if private service providers deliver as per agreed terms and conditions;	<ul style="list-style-type: none"> • Monitoring Indicators and Efficiency levels • Service Delivery Effectiveness • A Handy Format to Monitor Progress • Continuous Engagement for Sustainability
	9	Group Work	To apply the knowledge gained during the training in order to customise a service contract	<ul style="list-style-type: none"> • Customising the Service Contract Agreements (GD)
	10	Plenary Presentations & Concluding	To provide opportunity to demonstrate the level of grasp of the learning that took place	<ul style="list-style-type: none"> • Plenary Presentations & Concluding

Note: Each session lasts for 45 minutes followed by 15 minutes Q & A and discussions. Each session in this training module begins with expected 'Session Outcome'.

Session – 1: Introduction

Session Outcome

Upon completion of this session, the participants shall:

1. Recall the names of other participants in the training so as to get connected with them during and after the training
2. Be able to relate the purpose of the training with the duties and responsibilities a Gram Panchayat, with specific reference to sanitation and waste management
3. Recognise the significance of the topics to be dealt with, in various sessions and discuss the relevance of them in his/her locality

Duration

60 minutes (45 minutes active lecture, followed by 10 minutes discussion, and 5 minutes to transition into the next session).

Method

Lecture (with Programme Schedule in hand)

Materials Required

2- Day Programme Schedule
Minute-to-Minute Programme of the Inauguration

Session Outline

- Introduce the participants
- Introduce the purpose of the training (and the training schedule)
- State the importance of the training in the context of duties and responsibilities of GPs as per XI Schedule of the Constitution
- Reiterate the importance of the training from the stand point of public health, and government policy on Clean India / Clean Villages

PROCESS

Welcome and Opening: The trainer welcomes everyone, sets the tone for the training by explaining the prime purpose and the specific objectives of the training. He mentions the names of districts and or blocks where the participants come from. He invites the representatives from state / district administration, and other development partners to address. All of them hint upon the importance of solid waste management in rural areas, and the need to put in place a waste management system.

The session begins with a warm welcome to the participants from the training team followed by an explanation of the workshop objectives and what they can expect to have learnt by the end of the training session. Emphasis is given on enhancing their knowledge level and facilitation available for putting in place a waste management system.

Getting to know each other: The trainer will invite all the participants to the centre of the training hall to involve them in an activity. The activity aims at introducing each other, and becoming familiar with colleagues in the room. Detailed below are suggested activities that can be used by the facilitator to engage with the participants in this opening session. This initial activity should be made so informal that everyone should feel comfortable to talk to each other and raise questions or seek clarifications without any inhibitions. This activity must defreeze the situation. The trainer should also identify himself with the participants, and be enthusiastic in the training and about everyone.

Activity: After a formal welcome, the trainer must have a plan to let the participants get to know each other. It won't be exciting if they were asked to tell their names one by one. One suggestion could be conducting a paired interview. In a paired interview a participant chooses another participant he wants to talk to. Both of them choose a place a little away; sit for about 5 – 8 minutes to discuss and get to know some details about each other. All the pairs get back to their seats in the training hall. Back in the in-house session Mr A introduces Mr B to the crowd, and vice versa. The same way, the trainer also gets introduced to the participants. Depending on the size of the group and space in the venue, participants sit in a circle. The game continues until each person is introduced. This game can be adapted / improvised so as to make it more fun.

In the remaining minutes of the session, the facilitator will thank all the participants for their participation in the exercise and will present a brief overview of the design and purpose of the training. If time permits this could be followed by questions from participants with responses from the session facilitator.

TECHNICAL NOTES FOR THE TRAINER

The facilitator must ensure that inaugural speaker's notes are prepared and the speaker is briefed well in advance. The entire training team must be present at this session to welcome the participants and then to participate in the 'ice-breaking' games and exercises and the introduction that follows. Special care needs to be taken to ensure the participants clearly understand what the training is trying to achieve and feel comfortable in the training environment.

Sanitation is a duty of the Gram Panchayats as per the XI Schedule of the Constitution. Moreover, water and sanitation are state subjects. Therefore, it is one of the mandated duties of Gram Panchayats to arrange for waste management service. The 15th Finance Commission has placed 60% emphasis for water and sanitation related services. This is another reason why we should take it up seriously. Indeed, the time is very opportune now – in the next 3 – 4 years - for the GPs to put in place a proper water and sanitation services as per the national bench marks.

The inaugural session should serve the purposes of: (i) participants getting to know each other; (ii) creating a comfortable learning environment - physically and psychologically; (iii) describing to the participants the objectives of the training; (iv) and discussing what the participants can look forward to learn in each of the session scheduled.

PowerPoint Slides

(Ready to use PowerPoint Slides for use by the trainer)

Session – 2
Understanding Solid Waste in Rural Context

Session Outcome

Upon completion of this session, the participants shall:

1. Recognise the magnitude of the problem solid waste is, in the context of rural areas, and to identify the health risk it causes to the humans, and other living species on earth, and to the planet earth itself.
2. Know various types of wastes, and discuss waste as such is not a problem, but mixed up waste in the form of garbage is rendering it unfit for scientific treatment, and disposal, thus the mixed up waste is the real problem
3. Discuss that ‘zero waste’ is a possibility if we put in place proper waste collection, treatment and disposal system

Duration

60 minutes (45 minutes active lecture, followed by 10 minutes discussion, and 5 minutes to transition into the next session).

Method

Lecture with PowerPoint, and vides
Play relevant videos

Materials Required

Relevant lecture with PowerPoint
Videos already selected and ready to play
White Board with markers

Session Outline

- Solid Waste: Magnitude of the Problem
- Types of Waste in Rural Areas
- Why is waste a serious problem?
- Vision: ‘Zero Waste Panchayats’

PROCESS

Note to the Trainer

- Everyone faces the problem of waste in daily life. Therefore, this session is best kept as a lecture-cum-discussion. The trainer can interestingly take this session through a series of provocative questions on the behavior of one’s neighbours!. It’s about neighbours because when it comes to waste disposal, everyone thinks: I am better compared to many others in my locality. There is a lot of scope for this session to go on in a participatory way. The discussion should move towards understanding: *the result of our indiscriminate disposal of waste is the garbage heap of over one billion people in this country.*
- Then we can slowly steer the discussion towards, various types of wastes in the context of a rural village. They may include: wet waste; dry waste; and sanitary waste.
- We must point out here that segregated waste can go into respective streams for proper treatment, and scientific disposal. Mixed up garbage goes to a dump site, occupying space, polluting land, water and the environment. Such environmental pollution takes a boomerang to our food chain, impacting on our health and life. It must be viewed that our having to address waste is a medical emergency.
- Therefore, waste as such is not such a problem, except for some packaging materials which are toxic and non-recyclable. The real problem is our inability to put in place a proper waste management system. The lack of cooperation and support on the part of households and communities to segregate waste so that it can go to their respective streams is the real problem. This is ‘the real problem’, about waste.
- The first lesson in waste management is: *Mixed up waste is garbage, which becomes fit only to go to a dump yard. Segregated waste can go for scientific treatment and disposal.* Therefore, segregate waste at the source, at the household level.
- If various types of segregated waste got processed scientifically, and hardly 10% of the inert waste or residual waste (which can neither be reused nor be recycled)

goes to a scientifically constructed landfill, then we can call that GP as a Zero Waste Panchayat. A Zero Waste Panchayat processes nearly 90% of its waste. Hardly 10% goes to the landfill.

TECHNICAL NOTE TO THE TRAINER

Magnitude of the Problem: The domestic waste generated in rural households of India is increasingly becoming an issue of serious concern. Though, solid waste generated in rural areas is predominantly organic and biodegradable, it is becoming a major problem as the waste generated is not segregated in-situ, and is of the order of 0.3 to 0.4 million metric tons per day as reported the Department of Drinking Water and Sanitation (DDWS), Government of India. Inconsiderate littering causes poor environmental sanitation, resulting in unhealthy quality of living. Therefore, domestic refuse should be handled responsibly. In order to manage waste in a desirable way, there should be a functional waste management system in place. Without a waste collection and disposal system at the Panchayat level it is arbitrary to hold individual households responsible, or blame them of irresponsibility.

The Government of India (GoI) as well as many State governments are looking up to Gram Panchayats to come up with a working system to manage solid waste in rural areas. Some Gram Panchayats are successful in managing solid waste, while many others struggling to take afloat, not knowing how to manage this mammoth task. The reasons are many. Gram Panchayats have many duties and responsibilities, among which sanitation is one of them. The time a GP has to spend on sanitation and waste management is likely to consume much of its energy, manpower and funds. Secondly, not all GPs are trained in waste management. Thirdly to assign managing this task to a third party is not a commonly noticed practice, although it's a feasible option. The GPs must be aware of the service contract management procedures, service level benchmarks, and ToR to consider this option.

Why is waste a serious problem? Waste as such is not a problem. Mixed up waste thrown in the street corners, as garbage, is the serious problem. Segregated waste renders it convenient for further processing. Scientifically treated waste can become usable products again. They are converted into usable products or recycled / up-cycled. It does not matter who undertakes managing waste – be it GP or a professional waste management agency, the prerequisite is: Segregation at source – meaning segregation at the household level or at restaurants, marketplaces, where it is generated. The first lesson therefore, is 'segregation of waste by type at source'. The table below (Waste Category) shows various types of wastes.

Box – 2.1: Waste Category

Wet Waste	Dry Waste	Hazardous Waste
Vegetable peels	Soap covers / pockets / sachets	Mosquito repellent refill bottles/ Mosquito repellent mats
Fruit peels	Empty shampoo bottles	Expired medicines
Rotten fruits and vegetables	Empty perfume bottles / containers of deodorants / shaving creams	Tablet covers / Syrups bottles
Leftover food	Milk covers	Any medical discard
Used tea / tea bags	Used door mats/door mats	Sanitary napkins
Used coffee ground	Used tooth brush	Children's diapers
Egg shells	Chocolate wrappers	Used condoms
Coconut shells (including tender coconut shell)	Butter wrappers	Used razor / razor blades
Mango kernel & any seed	Used mop cloth	Old batteries
Coconut fibre	Ghee / oil pockets / cans	Fused bulbs / tubes / electrical items
Used flowers / dry flowers	Package / polythene covers / Plastic covers	Broken glasses / ceramics
Spoiled spices	Newspapers / card boards	Empty cans of toilet cleaners
Floor sweeping dust	cosmetics containers	Expired cosmetics
Meat & non-veg remains	Thermocoal	Cockroach killers / spray cans
Expired bread, biscuits and other food items	Broken stationery like used pens, pencil sharpener	Old printer cartridge / CDs
Hair	Empty cans of floor cleaners	Tetra pockets
Garden shrubs	Kurkure / Lays packets	Used odonil bottles
	Unusable shoes /	Old Electronic items / parts
	Sachets (of shampoo, creams etc.)	Pieces of wires, old chargers, old pen drives
	Bisleri kind of water bottles	Old paints / old household chemicals / cleaners
	Used tooth paste tubes etc.	Insecticide sprays / leftovers
	Broken household plastic items / and toys	Toxic rejects
	Tin bottles like Pepsi cans	Cotton/ tissue papers used for medical purpose
	Small tubs like the ones used for yogurt, cheese, jam	Rusted iron pieces
	Pieces of aluminum foils	
	Old brooms	
	Paper napkins	
	Destroyed old cushions	
	Leather, rexene, rubber	
	Iron pieces	

1. Each household shall segregate waste into wet waste (kitchen waste - GREEN) and dry waste (YELLOW), and Hazardous Waste (RED), and put in the bin given specifically for each purpose. This is called primary segregation, which will be the responsibility of the residents. The foundation for success or otherwise of this effort absolutely lies at this stage.

2. Vegetable peels, fruit peels, egg shells, used tea leaves, leftover cooked vegetables / food may be put in wet waste bin (Green). But never in a use-and throw cover; never knot it, please. Either give them as such or wrap it only with old newspaper.
3. It is always good to wash inside of a milk pocket with water. Washed milk cover renders it easy for the sanitation workers to deal with it. [Never throw empty milk covers on the street. The stray cows, buffalos and calves tend to chew up and eat them because of the milky smell on the cover. Accumulated polythene covers in their stomach prove deadly].
4. As far as possible leftover food items such as fish bones, mutton and chicken bones may be given to cats / dogs, if available at the households. This is a way to deal especially with leftover food at household level. If not, these items may be put under wet waste (GREEN Waste), which can be fed either into a bio-gas plant or allow them to decompose along with the wet waste you convert as compost.
5. Certain items such as sanitary pads, children's nappies, and condoms shall be wrapped in newspapers, or some papers available (put a red X [cross mark]) or stick a piece of RED cello tape, before it is handed to the sanitation workers. Such marking helps easy identification so that the sanitation worker shall handle it appropriately.
6. The households must be educated through appropriate IEC to avoid putting used sanitary pads in plastic carry bags and knotting it. They should always be wrapped in old newspapers or some paper available. Similarly, please avoid putting kitchen waste (vegetable peels etc.) in carry bags and knotting it.
7. The sanitation workers (in uniform & cap) shall visit every household with a cart / tri-cycle, and blow a whistle to let the residents in that area to get to know that the waste collection vehicle has arrived. It is the responsibility of each household to give the three baskets to the sanitation workers, who shall empty each basket in separate containers they bring / in partitioned vehicles.
8. Door to door collection takes place. The vehicle takes the primarily segregated waste to the secondary segregation shed of the GP for further segregation, resource recovery and treatment in respective streams.

Zero Waste Panchayats: During this training the GP functionaries must be provided the vision of becoming Zero Waste Panchayat. The idea of a zero waste Panchayat goes like this. A Zero Waste Panchayat processes nearly 90% of its waste. Hardly 10% goes to the landfill. This means to say that if various types of segregated waste got processed scientifically in their respective streams, and hardly 10% of the inert waste or residual waste (which can neither be reused nor be recycled) goes to a scientifically constructed

landfill, we call such GP as a Zero Waste Panchayat. The idea here is progressive reduction of the amount of waste that goes to the landfill / dump yard.

PowerPoint Slides

(Ready to use PowerPoint Slides for use by the trainer)

Session – 3
Putting in Place a Waste Management System

Session Outcome

Upon completion of this session, the participants shall:

1. Tell how to estimate the total amount of waste generated in a Gram Panchayat, and how to tell the amount of waste by type
2. Explain how to put in place a waste management system, and describe what does such a system entail
3. Prepare logistics plans, and infrastructure plans for solid waste management for a given Gram Panchayat
4. Design IEC and Social and Behaviour Change Communication (SBCC) plans for enlisting the participation of communities and households to play their part as stakeholders in waste management system.

Duration

60 minutes (45 minutes active lecture, followed by 10 minutes discussion, and 5 minutes to transition into the next session).

Method

Lecture with PowerPoint, and videos
Play relevant videos

Materials Required

Relevant lecture with PowerPoint
Videos already selected and ready to play
White Board with markers

Session Outline

- Waste Survey, Waste Segregation & Streams
- What does Putting in Place a Waste Management System entail?
- Logistics Planning and Infrastructure Planning
- Community Preparation - IEC & SBCC

PROCESS

Note to the Trainer

The trainer begins this session with the following question. *When we plan to set up a waste management system in a Gram Panchayat, where do we begin? What is the first activity?* Then put across: we begin with assessment of the quantum of waste generated in a given Panchayat.

But how do we make an assessment? There are many ways. One of them is waste survey. We can go for sample households in each street, with a simple set of questionnaire, and collect data on waste generated by individual households. You can also make a direct observation of their waste baskets.

Alternatively, you can also visit the designated dump yard, where the sanitation workers dump all wastes. When the waste disposal vehicle arrives, we can directly observe the quantum, and the number of trips a vehicle makes in a day. This can be followed by a discussion with the sanitation workers involved in door to door collection of wastes.

Waste, in the context of a village can be put into three streams. They are: wet waste, dry waste, and sanitary waste. We have already noted that segregated waste renders itself for scientific treatment. Each type of waste going in its respective streams is highly desirable for scientific management of waste.

How to treat / deal with each type of waste will be discussed in another session. As of now, note down that estimating the quantum of waste by type is important to put in place a waste management system. This helps in logistics planning, infrastructure planning and manpower planning and so on.

We have been repeatedly mentioning about ‘Putting in Place a Waste Management System’. What do we mean by that? What does such a system entail? By waste management, often we understand that we are talking about methods and techniques for waste treatment. Treating or processing various types of waste is only a part of waste management.

Waste management, in fact, entails end-to-end planning. It implies that there are elements of community preparation, logistics arrangement, infrastructure, technical management, financial management, economics, service contract management, adherence to state environmental standards and norms, and sustainability plan.

For instance, to put in place a door to door waste collection arrangement, and to have the required facilities for processing the waste thus collected, we need to make a logistics plan such as collection vehicles, drivers and sanitation workers, manpower plan (skilled – unskilled) and infrastructure plan etc.

The prime for all these to become success is community participation. We need to train and prepare the households / communities to segregate waste. Source segregation is the first step, if at all waste management has to become successful. Mixed up waste becomes garbage. Garbage can go only to a dump yard – not to a waste processing centre. If we are talking about ‘Management’ then the first step is preparing the community through IEC and SBCC activities.

TECHNICAL NOTE TO THE TRAINER

Waste Survey, Waste Segregation & Streams: For a GP to plan for setting up a waste management system, what data and information are required? The GP needs to know the quantity of waste generated – by type; who are the waste generators; how many bulk waste generators exist in the GP, and what arrangement they have, if any, for waste disposal? For obtaining such data a waste survey is necessary. This data is necessary to be able to hold a discussion with a third party agency, if we have plans of contracting out the solid waste management task to such agencies.

Estimation of the nature, type and quantum of wastes generated by different category of people viz. households, tea stalls, restaurants, marriage halls, vegetable market, fish market, bus stand, temples, and schools etc. is necessary to be able to plan for collection, transport, and manpower requirements. For households, average waste generated can be estimated through a sample survey of households or by making a Direct Observation at the dump yard, while daily dump takes place. Spot visits must be made of the bulk waste generators so as to assess the amount of waste each restaurant / temple or vegetable market is generating. The following is a sample waste survey format.

What to include in a Waste Survey?

- i. Source of waste (Households, restaurants, marketplaces, streets etc.)
- ii. Types of waste generated
- iii. Amount of waste generated type-wise (Wet / Dry and Hazardous etc.)
- iv. Identify vulnerable spots/ infamous spots – dumping sites
- v. Existing disposal practice – at household level, and at marketplaces
- vi. How do institutions like schools, ICDS, local clinics dispose waste?
- vii. What is the capacity of the GP to implement an SWM plan
- viii. What does it take to build the capacity of the GP to manage an SWM unit?

Report from Waste Survey

Break-up details of Waste Generated in Gram Panchayat

S.no	Name of the area	Waste generated per day inGP				Total (kgs)
		Wet waste (kgs)	Dry waste (kgs)	Hazardous waste (kgs)	Road sweeping waste (kgs)	
1	Ward - 1					
2	Ward - 2					
3	Ward - n					
4	Main Streets					
5	Market area					
6	School / ICDS					
7	Ration shop					
8	Temple / church / mosque area					
9	Tea stalls / Restaurants					
10	Marriage halls, if					
Total						

- Total Waste Generated per day
- Average amount of waste by each household
- Average amount of waste generated by other residents / shops & establishments / shandy
- Understand the existing waste disposal system
- Identify vulnerable / infamous spots
- Nature of the community (in response to previous efforts of similar nature)
- What kind of a plan is required at the GP level to take up SWM project
- Who should we involve in terms of support institutions, and implementation partners?

What does Putting in Place a Waste Management System entail?

Putting in place a system for solid waste management involves primarily: (i) policy guidance; (ii) institution to implement the policy; and (iii) funds to implement the policy. In the context of a Gram Panchayat, policy can mean a local by-law on solid waste management. This by-law is a broad road map (e.g. a five-page note) on how a given GP is going to address the issue of solid waste generated by households and institutions. This

is approved by the Gram Sabha. Secondly, Gram Panchayat is the institution to implement the by-law approved by the Gram Sabha. Thirdly, the by-law also spells out sources of funds – governmental, own and user fees etc. to raise revenue to be able to meet the expenses involved in waste management.

This policy or road map also clarifies (i) responsibilities of the waste generators; (ii) responsibilities of the GP; (iii) responsibilities of the sanitation workers; (iv) responsibilities of third party agencies if any involved etc. When such a system is created and operationalised for about a year successfully things tend to fall in place. This is not discussed in detail here, as this is beyond the scope of this training manual. See annexure – 1 for a model by-law on solid waste management, and for further details see the trainer resources given at the end of this section.

Logistics Planning and Infrastructure Planning: Solid waste management requires systemic – end to end planning. A GP needs waste collection vehicles, tools and equipments, trained manpower, segregation shed, composting infrastructure etc.

- 1) **Material Planning:** Tri-cycles or (solar) battery operated vehicles for waste collection (one vehicle with two waste collectors for every 150 households, for instance), uniform and gears (jacket, gloves, cap, water bottle, first aid kit) for the workers, segregation shed, compost yard for wet waste, storeroom to lay in dry waste, tools and equipments. In constructing the segregation shed or vermin-compost bed MGNREGS workers can be liberally used. But, they cannot be assigned the task of collecting waste from door to door, as per norms. Moreover, a MGNREGS worker cannot be used for more than 100 days, necessitating new persons be recruited every three months. This will be an interruption to the task of waste management, which is expected to be a regular service.
- 2) **Manpower Planning:** SWM is a labour intensive work. We may need at least two workers per 150 households, and it may vary depending on how scattered or thick the settlement is. That means with each garbage collection vehicle two workers can be deployed, who can help each other. They can together cover 150 households every day. They may cover 150 HH in the morning (7.00 – 10.00 am) and 150 HH in the evening (4.00 – 7.00 pm). Two hours can be spent in secondary segregation at the shed - one hour in the morning and one hour in the evening. The experience in some places is that poor and destitute women are trained in this work. SHGs have signed service contract agreements with GPs. Those already

involved in rag picking are also recruited and trained. Skilled and unskilled manpower can also be outsourced through third party agencies.

- 3) **Technical Planning:** This is about processing and treatment of wastes collected. This guide does not suggest elaborate treatment methods. It suggests to go for simple windrow composting with wet waste, and if possible to go for vermi-composting. The dry waste can be segregated and what can be sold as recyclables may be periodically sold to merchants who deal in scraps /waste recyclable items. The rest may be sent to a sanitary landfill. This is not discussed in detail here, as this is beyond the scope of this training manual. See Trainer Resources, just in case you want to know more about it.

Community Preparation & IEC: It has been reiterated in the opening section of this training module that segregation is the key to the success of waste management. For proper segregation to happen, the GP needs to educate, undertake IEC campaigns. Each household must be provided with two buckets – Green, Yellow and Red. (a) The Green bucket is for disposing of kitchen refuse, leftover food and other wet waste; (b) The Yellow bucket is meant for keeping dry wastes; and (c) Red bucket is for keeping hazardous wastes like batteries; fused bulbs etc. For an illustrative list of wet waste / dry waste / hazardous waste see Box – 2.1 (Waste Category). The wet waste in the Green buckets shall be collected daily morning (or morning and evening) as decided by the Gram Panchayat. Wet waste must be collected when it is still fresh and has not started emitting smell. The dry waste shall be collected separately, and the sanitary waste shall be collected separately wrapped in a newspaper so as to send them straight for incineration, without having to touch it.

There is a need for several IEC campaigns in order to sustain the waste management effort of the GP. This is not discussed in detail here, as this is beyond the scope of this training manual. See Trainer Resources, just in case you want to know more about it.

PowerPoint Slides

(Ready to use PowerPoint Slides for use by the trainer)

Session – 4

Technical Management

Session Outcome

Upon completion of this session, the participants shall:

1. Distinguish various types of wastes, and differentiate their characteristics and the need for segregation by type for scientific treatment of waste
2. Recognise various methods and techniques available for home-composting of wet waste (bio-degradable waste), and other centralised level treatment available
3. Recognise how to deal with dry wastes, especially plastic waste and how the block level Plastic Waste Management Unit under the SBM-G, and EPR agencies recognised by SPCB could help in dealing with plastic wastes
4. Discuss how to collect, treat and dispose sanitary wastes from households in an environmentally non-polluting way

Duration

60 minutes (45 minutes active lecture, followed by 10 minutes discussion, and 5 minutes to transition into the next session).

Method

Lecture with PowerPoint, and vides
Play relevant videos

Materials Required

Relevant lecture with PowerPoint
Videos already selected and ready to play
White Board with markers

Session Outline

- Layers of Segregation
- Wet Waste Management

- Dry Waste Management
- Plastic Waste Management
- Sanitary Waste Management

PROCESS

Note to the Trainer

We touched upon various types of waste, and that the imperative for success in waste management is ‘segregation’. In this session, assuming that the households segregate waste, and proper collection takes place, let’s discuss about scientific treatment of waste by type.

Wet Waste Management: The best way to deal with wet waste is promoting / training the households to involve in home composting. This is simple. This is cost effective because it reduces the amount of waste, otherwise the GP has to deal with. When waste is collected from door to door, there are many centralized methods of composting. They include: Windrow composting, vermin-composting, NARDEP composting and so on. These wet waste management techniques are explained in the Technical Note.

Dry Waste Management: Dry waste include a mix of papers, card boards, plastics, bottles, used up toiletries containers etc. A sample list is given in the Technical Note. The best way to deal with dry waste is ‘Secondary segregation them into: plastics, bottles, card boards etc. They can be sold to the scrap dealers / recyclers. Collect their contact details. We need to ensure that dry waste is kept clean so that they are fit for recycling. Dirty and highly contaminated items become unusable.

Plastic Waste Management: There are several different types of plastics used in various products we purchase today. There are plastic containers. There are plastic wrapping materials. There are plastics in daily use household items. Plastic is a versatile material. Plastic as such is not a problem. But, we must reduce the use of plastics; ensure recyclable plastics that have reached end of its life reach the recyclers; and have a proper collection system for managing plastic waste. The SBM-G proposes having Block level Plastic Waste Management Units in order to deal with the total plastic waste generated in every block. The Plastic Waste Management Rules – 2018 envisages that manufacturers and distributors who introduce plastics into the market should arrange to collect them back, under the Extended Producer Responsibility protocol.

Sanitary Waste Management: There could be sanitary pads such as menstrual pads, and diapers coming along with domestic and hospital waste. They need to be collected separately and dealt with appropriately. There are methods like incineration or deep burial recommended. Open burning is prohibited. The best is to treat such waste like medical waste, along with hospital waste generated in the local Sub Health Centre or Primary Health Centre.

TECHNICAL NOTE TO THE TRAINER

We touched upon various types of waste, and that the imperative for success in waste management is 'segregation'. By character some of these are bio-degradable waste. Such waste can be easily composted. Others are non-biodegradable and so they have to be appropriately treated after further segregation into bottles, plastics, card boards, papers, and so on. In this session, assuming that the households segregate waste, and proper collection takes place, let's discuss about scientific treatment of waste by type.

Wet Waste Management: The best way to deal with wet waste is promoting / training the households to involve in home composting. This is simple. This is cost effective because it reduces the amount of waste, otherwise the GP has to deal with. When waste is collected from door to door, there are many centralized methods of composting. They include: Windrow composting, vermin-composting, NARDEP composting and so on. Some of the wet waste management techniques are briefly given below.

There are following options of composting of wet wastes

1. NADEP Method
2. Indore method
3. Vermin composting
4. Biogas Technology

1. NADEP Method:

Under the NADEP method organic composting can be prepared from a wide range of organic materials including kitchen waste, dead plant material such as crop residues, weeds, forest litter, cattle dung and kitchen wastes. Compost making is an efficient way of converting all kinds of biomass into high value fertilizer that serves as good alternative to farmyard manure, especially for crop-growing households without livestock. In this

method composting materials are put in layers in a rectangle brick structure. Since this is an aerobic method, there are holes to enable aeration in the tub. Daily wet waste is dumped here in layers and covered with some amount of cow dung / soil / sand. This is the best solution for schools, *anganwadis* and even small restaurants to deal with their daily food waste / kitchen waste.

2. Indore Method / Windrow Method

In this method, waste materials such as kitchen waste, plant residues, animal wastes, weeds, street refuse and other organic wastes can be composted. The waste materials are cut into small pieces and spread in layers of 10-15cm thickness either in pits or in heaps of 1m wide, 1 m deep and of convenient length. It is properly moistened with cow dung using earth. The ensure 50% moisture sufficient water should be sprinkled for making the composting materials moist. Periodically, three to four turnings are given. This method of composting in pits involves filling of alternative layers of similar thickness.

For starting the turning operation, the first turn is manually given using long handled rakes, 4 to 7 days after filling. The second turn is given after 5 to 20 more days. Third turn is also given after 5-10 days. Further turning is normally not required and the compost is ready in 4-5 weeks. The Indore method stabilize the material is shorter time and needs lesser land space. As no odorous gases are generated in this process, it is environment friendly & hence commonly preferred. The composted material obtained by this method will contain 1.5% nitrogen, 1.0% phosphorus and 1.5% potassium advantages and limitations. The Indore process requires relatively high labour requirement. No much technical inputs are required to complete the process.

3. Vermi Composting

Vermin compost is a natural compost of organic wastes through earthworms, who take up organic wastes including kitchen waste and after degradation and digestion, convert such wastes in the form of granules, rich in nitrogen content. Such vermi cast or vermi compost has good plant nutrients and therefore compost. This is a natural composting method. being used in India and other countries for centuries. However In recent years there has been systematic methods developed to enhance such composting by using improved methods and strains of earthworms in rural as well as urban areas in India also. In order to use vermin-compost method to convert kitchen waste (bio-degradable) as vermin-compost requires at least 2 days intensive training. Earth worms are very

sensitive species that live in moisture of less than 20 degree C. They eat only partially composted kitchen waste fed along with cow dung, and not fresh kitchen waste. Fresh kitchen waste - as days go by - tends to generate heat killing the earth worms. Therefore, training is required if one opted this method of composting kitchen waste.

4.Biogas Technology

In villages, most of the people use animal dung-cakes for cooking purpose. Such animal dung along with kitchen waste (or human wastes) can be effectively used for biogas generation through on-site biogas plant linked with toilet. Biogas plant is important in providing sustainable energy sources in rural communities. Generation and utilization of bioenergy has multiple advantages. It helps improve sanitation, provide bioenergy at almost nil recurring expenditure and finally slurry/effluent of biogas plant has plant nutrient value to be used for agriculture purposes. Thus biogas plant has additional benefits in terms of improving sanitation. In villages where household wastes contain mainly organics, or waste from vegetable markets are also suitable for biogas generation. Such wastes can also be mixed in the same biogas plant to generate biogas production. In case of community toilets, biogas generation from human waste is sustainable option.

Biogas is a mixture of gas produced by methanogenic bacteria while acting upon biodegradable materials in an anaerobic condition. Biogas is mainly composed of 50 to 70 percent methane, 30 to 40 carbon dioxide (CO₂) and low amount of other gases. Biogas is an odourless and colourless gas that burns with clear blue flame similar to that of LPG gas. This can be an option for converting kitchen waste and cow dung into cooking gas for households or to use the gas in community kitchens.

Plastic Waste Management

There are various types of plastics that get into our houses mainly as packaging materials or as household utilities. Plastic is a versatile material. Open burning of plastic and irresponsible disposal should be prevented. Plastics at the end of its life cycle must be responsibly collected sent for recycling. Implementation of Plastic Waste Management would involve (i) Storage Facility at Village level; (ii) Material Recovery Facility/Plastic Waste Management Unit at District/Block level.

For collection and transportation of plastic waste, the same vehicles with partition of bio-degradable and non-bio-degradable waste may be used.

Transportation of plastic waste from these collection and aggregation centres (sheds at village level) to block or district level, where Plastic Waste Management Centres

(PWMC) will be set up. Such a centre will have one shredding and baling machine to reduce the volume of the plastic waste collected.

List of scrap dealers in the district to be prepared and included in the plan. If possible, the name and details of cement industries in vicinity or within 150-200 KM to be enlisted.

The shredded and baled plastic waste can be used for road construction (ref. using plastic in construction of roads in the Indian Roads Congress code SP 98-2013) or for co-processing in cement industries.

Formalize collection through entrepreneurs in rural areas. States must encourage individual or SHG oriented last-mile entrepreneurs for plastic waste collection and provide them with formal contracts at the village or GP level as well as connecting them to plastics aggregation points.

Sanitary Waste Management

Certain items such as sanitary pads, children's nappies, and condoms shall be wrapped in newspapers, or some papers available (put a red X [cross mark]) or stick a piece of RED cello tape, before it is handed to the sanitation workers. Such marking helps easy identification so that the sanitation worker shall handle it appropriately.

PowerPoint Slides

(Ready to use PowerPoint Slides for use by the trainer)

Session – 5

Financial Management

Session Outcome

Upon completion of this session, the participants shall:

1. Know the various sources of funds available from schemes such as SBM-G, Rurban Mission, and XV Finance Commission for setting up solid waste management unit at GP level or at Cluster level
2. Distinguish one-time (capital cost) expenses for setting up infrastructure facilities from the recurring expenses month after month in order to support the Operation and Maintenance (O & M) of the unit
3. Make an assessment of O & M expenses through a rough budgeting exercise so as to have a clarity on the financial sustainability
4. Estimate and examine the likely expenses to be incurred in O & M of SWM Unit, and the sources of income / funds to be able to meet the O & M expenses for operational sustainability
5. Identify viability gap, if any between likely income and expenses, and discuss how to achieve viability

Duration

60 minutes (45 minutes active lecture, followed by 10 minutes discussion, and 5 minutes to transition into the next session).

Method

Lecture with PowerPoint, and vides
Play relevant videos

Materials Required

Relevant lecture with PowerPoint
Videos already selected and ready to play
White Board with markers

Session Outline

- Schemes /sources of funds for setting up SWM Unit
- Difference between one-time expenditure, and recurring expenses
- Capital expenditure items, and the sources of funds meeting them
- Budgeting for Operation and Maintenance
- Achieving Operational / Financial Sustainability
- The Idea of waste to wealth / financing and the economics

PROCESS

Note to the Trainer

Setting up a solid waste management unit involves purchasing waste collection vehicles, constructing segregation shed, vermin-composting bed etc. For such onetime investment, funds can be availed from the Swachh Bharat Mission. The details are given in the technical notes below. Where SWM has been included in the ICAP of Rurban Mission, Rurban Mission funds can be used. For all labour components involved in setting up SWM Unit MGNREGS can be used. We have XV FC funds also, just in case there is a gap to meet any of these expenses. There is no problem of funds as far as one-time investment is concerned.

The Government of India / State governments provide (through various schemes) one-time capital expenditure involved. However, the real challenge is meeting the Operation and Maintenance (O & M) expenses month after month. For this, there is no government assistance, except the XV FC funds. Sixty per cent of the XV FC funds can be used for water and sanitation (WASH) related expenses. Waste management is one of activities under sanitation. There could be major expenses in providing drinking water supply, for which XV FC might be required. Therefore, it is advisable to fix waste management service charges amongst the households, shops and establishments.

In the event of appointing a professional private agency (NGO) to manage waste on behalf of the GP, the agency appointed has to be paid as per service contract agreement. The payment terms can be monthly, quarterly, half-yearly or annual. Whatever it is, the GP must settle on beforehand the source of funds to honor the service contract agreement. This brings in the need for collecting service charges from the users of services. The users can directly pay it in the GP office along with water services charges

or pay directly to the agency providing the service, as per terms and conditions agreed upon.

In order to have an idea of what is the financial net result of SWM activities, it is suggested that the GP to do a rough estimate of: what is likely to be the income earned and expenses incurred. The net result of this exercise shall give an idea of financial sustainability – in other words, if the SWM activity is going to show up as surplus / deficit on the GP's budget. In case it showed a deficit, that's where we need to 'viability gap funding'. This can come from the XV FC funds. Or the GP can consider enhancing the user service charges. This is an important exercise every GP has to do in order to ensure operational sustainability. Often operational sustainability depends on financial sustainability.

These are some of the critical points to discuss under Financial Management. If the economics worked out favorably there is scope for writing a story on 'waste to wealth'.

TECHNICAL NOTE TO THE TRAINER

Schemes /sources of funds for setting up SWM Unit: Setting up a solid waste management unit involves purchasing waste collection vehicles, constructing segregation shed, vermin-composting bed etc. For such onetime investment, funds can be availed from the Swachh Bharat Mission. The details are given in the technical notes below. Where SWM has been included in the ICAP of Rurban Mission, Rurban Mission funds can be used. For all labour components involved in setting up SWM Unit MGNREGS can be used. We have XV FC funds also, just in case there is a gap to meet any of these expenses. There is no problem of funds as far as one-time investment is concerned.

Funding Norms: The cost norms of SBM-G for setting up solid waste management units has cost norms a provision of Rs.60 per capita (for GPs less than 5000 population); Rs.45 per capita (for GPs with more than 5000 population. To set up Plastic Waste Management Units at Cluster / Block level Rs.16 lakhs is available from SBM-G. For setting up bio-gas units upto Rs.50 lakhs (per district) can be availed from SBM-G. However, 30% of these funds should flow from 15th FC funds to GPs. There is also national biogas mission from which any additional fund can be availed especially for bio-gas units.

Financial Planning: This involves two types of costs. (a) Capital cost for setting up the facility, and (b) Operational cost for meeting out the recurring expenses month after month. The financial planning necessarily must involve a budgeting exercise too.

Capital cost

This is one-time Expenditure that pertains to Materials & Facilities. The physical facilities required for setting up an SWM are as follows. This is a sample list, not exhaustive. GP needs to organise these things so as to commence work.

- Land to construct the segregation shed plus composting yard or the vermi-beds
- Setting up a compost shed / segregation yard
- Baskets / Containers for households – 3 per household
- Green / Yellow / Blue Baskets (one for wet waste; other for dry waste and a third one for hazardous)
- Tri-cycles for every 300 households – 1
- Sanitation Workers (Janitors), 2 workers for every 300 households (to cover 150 HH in the morning and 150 HH in the evening)
- Uniforms (cap, gloves, whistle)
- Tools and equipment (broom sticks, bins, tin, sheets etc.)

Recurring Cost

The recurring cost may include payment to be made to the third party agency if waste management service is contracted out to private service provider. Otherwise, it includes wages to the sanitation workers, driver's salary, fuel and vehicle maintenance etc. This is called Operation and Maintenance expense. Funds to meet these expenses do not come from the government. The GP has to find its own source of revenue to meet these expenses.

In the event of appointing a professional private agency (NGO) to manage waste on behalf of the GP, the agency appointed has to be paid as per service contract agreement. The payment terms can be monthly, quarterly, half-yearly or annual. Whatever it is, the GP must settle on beforehand the source of funds to honor the service contract agreement. This brings in the need for collecting service charges from the users of services.

Service Options

Service levels selected to cater to user's requirements, e.g. types of tools, equipment, and vehicles to be used; frequency of service to be provided etc. will determine the cost of service. The GP need to decide on the level of service it desires to provide keeping in mind the cost of services and its capacity to recover the cost. Service levels need to be determined prior to fixing service fee. The followings are the options for the GPs.

Types of Users of Service

Residential: The households in Gram Panchayats of less than 500 households, especially those that are remote to any town or city may be encouraged to go for home composting, and collection of dry waste from door to door can be arranged on alternate days or thrice a week. In bigger Panchayats door to door collection of solid waste from households on a daily basis may be considered necessary.

Bulk Waste Generators: For bulk waste generators such as hotels, restaurants, and large complexes must be instructed to manage their own waste, or waste collection service can be given on demand basis. The service levels may be determined contractually keeping in mind the amount and type of waste generated.

Marketplaces: In vegetable, fruit and flower markets, the type of waste generated is mostly bio-degradable. Therefore, depending on the amount of waste generated, the GP should arrange for such places to have their own vermin-compost unit or bio-gas production unit. Vermi-compost can be sold to the vegetable and fruit farmers; and the bio-gas produced can be used for lighting the street lights in the market area.

Budgeting Exercise: Budget is an estimated income and expenditure statement. In other words, this is a dry run of the expenditure to be incurred, and the likely income to be accrued by the GP through the proposed SWM activity. This is a very essential exercise that Panchayat functionaries must do before actually venturing into fixing a third party for waste management service provision. This shall indicate the likely expenditure to be incurred, and what are the sources of income available to cover the expenditure so that the venture becomes sustainable. A blank budget format is given below.

Box – 5.1 Income and Expenditure for a Solid Waste Management Project (It is worked out assuming that this project is for 300 Households)	
Items of Expenditure	Possible Income Sources
A. <i>One-time Expenditure (Capital Cost)</i>	1. Service charge
1. Baskets (900 numbers) - Green, Yellow, Blue	2. Sale of compost items
2. Tricycles - 2	3. Sales of recyclables
3. Compost pit, segregation shed	4. Fine and penalties
4. Uniforms, gloves, caps, whistle	
5. Tools & equipment	
B. <i>Recurring Expenditure (Operational Cost)</i>	
1. Supervisor Salary	
2. Sanitary Workers Salary	
3. Consumables / bleaching powder etc.	
4. Repair and maintenance	

NOTE: Some GPs do SWM Project, on social enterprise mode only – meaning the expenditure is offset by another source of income to the GP. The income from sale of compost, and service charge meet only a portion of the expenditure. Therefore, there is a need to collect user charges. A portion of 15th FC funds can also be used for meeting such maintenance expenditure. It will be prudent on the part of the GP to find other (own) sources of income to be able to meet the expenses incurred on waste management.

A rough estimate is presented below. It presents how the budget looks like, when GP takes up waste management services. The same holds good when a third party agency is appointed for carrying out such tasks. The payment to be made to such agencies is a recurring expenditure. The budgeting exercise shall give an idea if it's going to be viable.

A Tentative Budget of Income and Expenditure for a month

(Assume: 900 Households / 3600 population)

Expenditure items	Rs.	Income Sources	Rs.
Sanitation workers salary (Rs.6000 x 6 workers cover 450 HH in the morning & 450 in the evening)	36,000.00	Service charge (900 HH x Rs.40)	36,000.00
Supervisor's salary (1 person)	6,000.00	Shops, restaurants, marriage halls etc.	6000.00
Consumables (bleaching powder etc.)	200.00	Sale of compost	2000.00
Repair & maintenance of vehicles	1000.00	Sale of Recyclables	2000.00
TOTAL	43,200.00	TOTAL	46,000.00

Note: It assumes that every household and every shop keepers pay service charge without fail. The budgeting exercise must be done even before kick-starting the SWM implementation at ward level or GP level.

Achieving Operational / Financial Sustainability: The success and sustenance of any SWM unit, most often, depend on financial sustainability. Operational sustainability of SWM units rests on financial viability to pay the service providers. In the absence of this, things come to a halt after a short stint. Therefore, the GPs have to take up the budgeting exercises seriously, which will indicate the need for viability gap funding. It necessitates the GP functionaries to prudently allocate funds for various purposes and recognize the need for differential service charges from users of the waste management service.

The Idea of waste to wealth / financing and the economics: It is often mentioned in seminars, conferences and training programmes on SWM that GPs can convert waste to wealth. Such conversion will bring in additional sources of funds to meet O & M expenses. But, the fact is (experience suggests) that a certain percentage of income can be expected from tasks such as sale of composts; sale of plastics, bottles, cardboards etc. However, it may not be enough to meet even one third of the expenses, though this is not a source to brush aside. We need not ignore such income. It is, certainly a source of income. But, GPs should not get misguided that sale of composts, and recyclable items shall provide enough to be able to meet the entire O & M expenses. Processing waste in respective streams; sending plastics, bottles and other recyclable wastes to recyclers is contributing the responsible well-being. It also contributes to the income of the GP. But income from such source alone is barely enough to meet the entire O & M expenses. This must be made clear. We need to show also other sources of funds, and income to meet the O & M expenses to steer the SWM in the direction of sustainability.

Financial Viability

The level of sophistication could vary depending on the financial capacity of the Gram Panchayat. It is good to keep SWM infrastructure as simple and easily manageable as possible. The bigger investments and infrastructure, the fatter will be the maintenance expenses, which obviously would place unnecessary financial burden on the GP. Suitable design and implementation of the system should be ensured. SWM Projects should be made viable by ensuring cost recovery through levying of user fees from the beneficiaries, prescribing appropriate fees or tipping fees for the services rendered, sale of end products from processing the waste, allocation of funds from GP's own internal resources and government grants / viability gap funding from the 15th Finance Commission Funds or MoPR and introducing private sector participation for efficiency and beautification of village under some CSR banner.

SWM services are sustainable only if they are financially viable on a stand-alone basis. We need to note down, attracting bids / professional service providers is possible only if there are strong indications of financial viability. Therefore, the assessment of financial viability is an important step in planning SWM system. The deficit in funding planned services, if any, should be estimated. The GPs are empowered to derive their income and raise funds from several sources.

Format for Assessing Financial Deficits

Sl.	Description	Year – 1	Year - 2	Year - n
1	Total Cost			
2	Revenue			
	Deficit (Total cost minus total revenue)			

PowerPoint Slides

(Ready to use PowerPoint Slides for use by the trainer)

Session – 6

Service Contract Management

Session Outcome

Upon completion of this session, the participants shall:

1. Recognise that GP managing solid waste does not have to always mean GP managing directly, and that rather it could mean managing through a service contract agreement with a professional waste management service provider
2. Know the basics of service contract agreements, bidding, and selection of waste management service providers on contract
3. Discuss list of model contracts and customise it or compose one that will be suitable for a given GP / cluster of GPs
4. Know a schematic of broad model contract typologies for engaging professional external agencies for solid waste management at GP level, and prepare a call for Expression of Interest / bid, and fair and transparent means of selecting an agency for awarding the contract
5. Apply the knowledge to examine the required licenses, permissions and environmental compliances, while entering into a service contract agreement

Duration

60 minutes (45 minutes active lecture, followed by 10 minutes discussion, and 5 minutes to transition into the next session).

Method

Lecture with PowerPoint, and vides
Play relevant videos

Materials Required

Relevant lecture with PowerPoint
Videos already selected and ready to play
White Board with markers

Session Outline

- Basics of Contract Management (Third Party Engagement & Service Contracts)
- Types of Model Contracts Introduced
- Required licenses, sanctions, permissions and compliances
- Provisions for Contract in State PR Acts
- Model Contract Typologies for SWM
- Guidance for Selection of Contracts
- Procedure of Awarding Contract
- Customization of Contract Documents to suit local needs

PROCESS

Note to the Trainer

Put across the point clearly that GP managing solid waste does not have to always mean GP managing directly, and that rather it could mean managing through a service contract agreement with a professional waste management service provider

Getting into a service contract agreement with a private agency / NGO requires familiarity with ‘contract management rules’ such as how to call for Expression of Interest (EoI) /competitive bidding process, how to prepare a bid document, how to shortlist and select agencies, and how to get into an agreement with them, how to define the scope of work, terms of payment, dispute settlement mechanism, and how to execute the contract and so on.

In this session, we shall introduce various types of contract agreements, and the sample for each one of them. We shall also discuss the scope of work with each type so that the GPs are able to decide, what suits them the best.

The GPs need to get familiar with tender procedures (as per state government rules), and in this section, we shall provide an overview of calling for bids, scrutinizing bids, and how to select an appropriate agency, and award the service contract. It has many legal and official procedures we need to introduce to the GP in this part of the module.

TECHNICAL NOTE TO THE TRAINER

Basics of Contract Management

Following are other essential aspects to be considered by the GPs while deciding to contract out solid waste management services:

- The GP should identify services that can be effectively provided by the existing staff and available financial resources.
- Subsequently, services which would need to be outsourced due to limited in-house technical know-how, capability, and financial resources should be identified.
- Benefits and potential issues with outsourcing services which the GP cannot provide (as identified above) should be fully evaluated and understood. Justification note for the need to contract out identified services should be prepared.
- Commercial or economic feasibility of the services to be contracted out has to be ascertained. The appropriate contract models and their benefits need to be assessed for each of the services that has to be contracted out.
- Sharing of all possible risks (technical, operational, and financial) between GP and the operator should be detailed out.
- Where land acquisition is involved, the GP has to stand in for the contractor in addressing such aspects.
- Contracts should specify the range of technology or technologies that can be adopted after the GP undertakes a thorough assessment of available technologies for specific services.

The GPs should consider separate contractor for every outsourced service such as drinking water supply, waste management service etc. However, where it is feasible and cost-effective services such as maintenance of sanitary complex and drainage cleaning may be combined to a single contractor. While deciding about outsourcing, the project must be clearly defined. The ToR of the contract should be based on a Detailed Project Report (DPR) developed.

ToR for Waste Management

On ascertaining the benefit of outsourcing services, the GP shall prepare a ToR which shall include at least the following:

- detailed description of scope of work
- specific outcomes or outputs of the services and performance standards for the services to be contracted / Service Level Benchmarks
- specified duration of the service to be contracted and time lines for provision of services
- minimum qualification and experience of the bidder required
- minimum staffing and equipment required for delivering the services
- envisaged monitoring and evaluation requirements
- management structure and reporting
- tender evaluation procedure
- payment mechanism
- adequate social and environmental safeguards to ensure equitable service provision
- confidentiality clause; and
- Service level guarantee mechanisms

Provisions for Contract in State PR Acts: The respective State Panchayat Raj Acts and Rules have issued there under contain rules and regulations of contracting for public works including water and sanitation services. These are further supplemented by the advisories issued by the MoPR and Finance Departments on procedural matters relating to tenders, contracting as well as delegation of financial powers. The GP needs to consult such state-specific procedural matters.

Basic Elements of Contract: The basic elements of contract include contract creation, contract execution, and contract implementation. These are briefly described below.

S.no	Description	Significance
1	Contract	In the context of GP, contract delivery of public services etc through third parties. The contracted services are carried out by these parties in accordance with the terms and conditions laid down in the contract. The “Contractor” is the service provider selected for performing the tasks mentioned in the contract.
2	Contract Engrossment	Contract engrossment is the process of preparing the final agreed form of contract and its schedules and appendices so that it can be executed.
2	Contract Execution	Contract execution is the process of signing an agreed contract, after which its terms and conditions become binding on the parties to the contract.
3	Contract Implementation	Contract implementation is the process where the parties to the contract perform the duties mentioned in the contractual agreement. The terms and conditions mentioned in the agreement are kept in mind in the performance of the contract.

Phases of Contract Management : Contract Management usually involves 3 key phases i.e Pre-Award Phase , Award Phase and Post Award Phase . These are described below briefly

S.no	Contract Management Phase	Activities carried out
1	Pre- Award phase	During this stage, GP focuses on the reason for establishing the contract and deciding whether the contractor can fully fill the terms of the contract to meet the waste management services required at the GP.
2	Award Phase	This is the middle phase when the contract is awarded which includes all the paperwork to make the agreement final.
3	Post-award Phase	In the post-award period the terms and conditions of the contract are implemented and services are delivered to the satisfaction of both parties.

Model Contract Typologies for SWM

Not all contracting models are suitable for each of the SWM operations. GP functionaries may adopt one or more of the following contracting models:

- **Contract out Collection and Transport only:** Contractor may be assigned only for door to door collection through vehicle arranged by him, and deliver at the segregation shed. The contractor provides the appropriate vehicle or vehicles with driver(s). He appoints his own sanitary workers who go in the vehicle for waste collection. Once segregated waste are collected from 100% of the households (and other areas as mentioned in the scope of work), the vehicles deliver at the segregation shed of the GP. Arranging for vehicles, maintenance, fuel, wages / salaries to be paid to the drivers and sanitary workers rest with the contractor.
- **Contract out only Treatment of Waste:** It may be defined in the scope of work that the GP shall arrange to collect segregated waste from door to door, and delivers at the segregation shed. Once segregated waste reaches the segregation shed the responsibility of the contractor begins. He arranges trained sanitary workers for secondary / tertiary segregation, and his skilled manpower treat such waste into respective streams in a scientifically acceptable way. It may include composting, vermin-composting, bio-methanation, incineration of sanitary waste, making refuse derived fuel (RDF), sending for recyclers, and consigning the residual / inert waste to a sanitary landfill etc.
- **Contract for Supplying only Unskilled and Skilled Manpower:** A contractor may provide only trained manpower – skilled and unskilled for the GP to be able to handle the waste in appropriate manner. This is like manpower contract service as demanded by the GP. The GP shall manage the entire task, by making use of the manpower supplied by the contractor. The GP shall sign a contract specifying the number of trained (skilled and unskilled) manpower required for specific tasks on certain payment terms to the contracting agency.
- **End-to-end Waste Management Service:** A GP may decide to hand over the entire solid waste management service to a professional waste management service provider. The scope of work may be defined as starting from door to door collection, to transport to treatment and proper disposal. The GP shall only monitor and review the work, and makes payments as per terms agreed.

The GPs may decide to bundle certain services while contracting out SWM operations to build accountability and efficiency in the system.

For professional operation and maintenance of SWM services at the GP level, the MoPR has issued guidelines for selection of contracts

Options for GP for Selection of Contracts: As there are wide-ranging variations in demographic size, geographic location, types of infrastructure facilities in view, the GPs have to choose the appropriate type of contract as per the local needs to ensure cost-effective utilization of resources. The following are the option for selection of contract for solid waste management services in the GPs

Individual GPs: Going by the size of Gram Panchayat based on population, and settlement pattern – and taking into aspects such as GPs with scattered habitations and has multiple habitations, number of streets, institutions, shops and establishments, the GP can opt for one of the following contract model

S.No	Type of Contract	Suitability and Justification
1	Contract for Comprehensive Waste Management Service	<ul style="list-style-type: none"> • This is to provide end to end waste management service starting from preparing the community for segregation, door to door collection, transport, and scientific treatment and disposal. If the population of the GP is more than 5,000 and / or with scattered habitations and has multiple habitations or streets, then the GP can opt for this model. • The Contractor responsible for regular operations, maintenance, providing collection vehicles with drivers, trained sanitation workers, skilled and unskilled HR, uniform, tools and equipments . The entire responsibility lies with the contractor. A model contract agreement is provided in annexure -2
2	Contract for O&M of Plant / Equipment	<ul style="list-style-type: none"> • The GP may decide to set up vermi-compost unit, or bio-gas units, or toilet linked bio-gas providing gas to a community kitchen etc. In such cases the technical management of such units / plants and equipments may require engagement of trained professionals. The GP may decide to contract out such components which involve professional engagement. Everything else will be taken care of by the GP appointed sanitation workers. If it's in the scope of work, the Contractor may coordinate with special service providers for treatment and disposal of hazardous solid wastes. A model contract agreement for O & M of Plants and Equipments is provided in Annexure - 3

3	Contract for Supply Skilled and Unskilled manpower as required by the GP	<ul style="list-style-type: none"> If the GP has set up population of the GP is less than 5,000 and / or with one or two habitations, fewer shops and establishments, the GP can opt for this model. The contractor shall provide only skilled and unskilled (trained) manpower as required by the GP. This is like a manpower service. It's the responsibility of GP to take up entire waste management service making use of the manpower provided by the Contractor. The GP prescribes the number of skilled / unskilled persons required. A model contract agreement form is in Annexure - 4
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Minimum Mandatory Technical & Performance Specifications or Project Information Memorandum

- Brief description of the project
 - Scope of Work
- General technical design requirements and standards
- Specific design requirements and standards for each facility
- Operation and performance requirements
- Existing infrastructure

Cluster of GPs: For the purpose of cost-effectiveness, it would be better for a single agency to cater to multiple GPs located nearby.. In such a scenario, the cluster of GPs may mutually decide to choose a single agency for delivery of the professional services under any of the model contract type mentioned above. The agency can be chosen from a list of applicants at the district level. The agency will need to enter into a separate contract with each of the GP in the cluster. The respective GP will be responsible for the payment to the agency according to the quantum of work in its jurisdiction.

Small GPs: Many GPs may not have sizeable work to be accomplished or financial resources at their disposal to enter into a contract with a professional agency. Some GPs may have a SVS with extremely simple water supply arrangements. Such GPs can appoint one trained persons take care of all services related to drinking water supply

Best Option for GPs: The best option will be to deploy local human resources for the execution of the contract services. This will not only provide improved services levels in the GPs but also generate employment and result in betterment in the livelihood of the rural population. The GP can enlist youth groups, self-help groups (SHGs), Start-up

Village Entrepreneurs (SVEPs) and educated unemployed youth who could be trained for carrying out O&M of the services.

Tendering, Contract Management and Supervision

Clause 15 of SWM Rules – 2016 states that that the local authorities (in this case the GP) shall facilitate construction, operation and maintenance of solid waste processing facilities and associated infrastructure on their own or with private sector participation or through any agency for optimum utilisation of various components of solid waste adopting suitable technology adhering to the guidelines issued by the Government of India from time to time through SWM Rules – 2016 or as under the Swachh Bharat Mission-G, and as per standards prescribed by the Central Pollution Control Board (CPCB) or respective State Pollution Control Board (SPCBs).

Undertake on their own or through any other agency construction, operation and maintenance of sanitary landfill and associated infrastructure for disposal of residual wastes in a manner prescribed under these rules.

Make adequate provision of funds for capital investments as well as operation and maintenance of solid waste management services in the annual budget ensuring that funds for discretionary functions of the GP have been allocated only after meeting the requirement of necessary funds for solid waste management and other obligatory functions of the GP as per these rules.

GPs may enter into contract with private service providers for provision of specified SWM services such as collection, transportation, treatment, processing, and disposal of waste. Private service providers have to be held accountable for maintaining required standards of services as well as its effectiveness and efficiency.

Adequate care should be taken while preparing tender documents to ensure that only those firms with requisite qualifications and experience are considered. The following aspects should be kept in mind:

- The tender should clearly specify the technical and financial capability required to perform the task proposed to be outsourced. The qualification criteria should be standardized. It should provide equal opportunity to all those who have a capability to undertake the task. It should not restrict competition between big players; at the same time, it should not allow incompetent, inexperienced, or unqualified parties to enter the fray. The eligibility criteria should be limited to what is required to perform the

obligation; this shall enhance healthy competition and create a pool of entrepreneurs to provide SWM services.

- Standardise prequalification criteria should support only those firms having adequate resources and expertise
- Selection of bidders should be based on technical and financial bids and specified criteria. This could be done in several ways:
 - The GP may prescribe minimum qualifying standards for technical bids; financial bids of only those bidders who meet the minimum qualifying standard may be opened unless otherwise justified.
 - GP may give higher weightage to qualifications and experience in cases where higher skills are necessary (for example, where bio-gas is converted as CNG, or converting waste into bio-gas to power to light street lights, marketplaces etc.).
- Awarding contracts to single party all aspects of water and sanitation services covering water supply, Community Sanitary Complex, SWM services etc. may be avoided, as it can create unmanageable situation if the contractor ceases to operate. Multiple contracts are desirable so that if one contractor fails, another can take over until other arrangements are made.
- A transparent and stringent monitoring and evaluation system should be developed to ensure that contractors perform their obligations. A simple monitoring format is given at the annexure - 5
- Long term contracts should provide for a periodic revision of tariffs based on predetermined parameters and create implementation mechanisms to ensure sustainability of the contract.
- GPs should ensure timely payments for contracted services.
- GPs should ensure adequate in-house capabilities for appropriate contract monitoring.

Engaging with Professional Waste Management Agencies

After a DPR, a transparent procurement process should be adopted for the selection of an agency by following these standard procedures:

- Preparation of expression of interest (EOI), request for proposal (RFP), and concessionaire agreement
- Obtaining approval from concerned authority
- Issue of notice for pre-qualification or EOI
- Short-listing of firms

- Issue of RFP to the shortlisted firms
- Conducting pre-bid meeting
- Receiving technical and financial bids in separate packets in response to the RFP and opening of technical bids
- Evaluation of the technical bid document received
- Opening of financial bids of the bidders (minimum three bids would be desirable)
- Evaluation of financial bids
- Selection of most preferred bidder
- Negotiation and signing of agreement
- Award of contract

Tendering Process for Engaging Third Party

The GP has an option of adopting a single stage selection process or a two-stage selection process for awarding contracts to the contractor.

Single Stage Process

In a single stage bidding process, technical and financial bids are submitted simultaneously in response to a RFP. The selection of the preferred bidder is envisaged through an evaluation of a three-part proposal received from interested bidders:

- **Part I – Response to qualification:** Pre-qualification will be based on the documents received from bidders in response to the qualifying criteria laid down by the GP. The idea is that the technical and financial offers of bidders, who do not qualify at this step, will be returned unopened.
- **Part II – Technical offers:** Technical offers in the proposals from bidders who qualified at the end of first stage will be opened and evaluated against predetermined criteria. Financial offers of bidders, who do not qualify at this step, will be returned unopened.
- **Part III – Financial offers:** Financial offers from proposals of those bidders whose technical offers are qualified shall be opened and scrutinized. Only those financial offers which are in accordance with criteria laid down in RFP shall be evaluated.

Two stage process

The two stage selection process is characterised by an initial prequalification stage, followed by RFP stage, which is applicable only to pre-qualified bidders.

Stage 1: Qualification stage: The request for qualification (RFQ) specifies the minimum qualifications required for participation in the tender. Suitability of interested parties or consortia will be assessed by the tender in accordance with the provisions of the RFQ. At the end of this stage, the authority will shortlist suitable pre-qualified applicants who are then eligible for participation in the second stage of the bidding process (the “bid stage”).

Stage 2: Letter of invitation: After the bidders have been shortlisted under the RFQ for the aforesaid project, GP should invite the bidders to procure the RFP with the objective of submitting a technical and financial proposal.

Request for Proposal (RFP) from GPs

The RFP is a document that GPs prepare to elicit bids from potential vendors. The quality of an RFP is very important for successful project management because it clearly delineates the deliverables that will be required. This RFP includes statements that reflect various assumptions and assessments by the authority in relation to the project. Such assumptions, assessments, and statements do not contain all the information that each bidder may require. The RFP should be organized into three sections:

- Section I: Instruction to bidders
- Section II: Minimum mandatory technical and performance specifications or project information memorandum
- Section III: Concession agreement

Section I: Instruction to Bidders (ITB)

The instruction to bidders specifies procedures to be followed by bidders in preparation and submission of their proposals and provides information on submission, opening, evaluation of proposals, and award of concession. Indicative contents of the instruction to bidders include the following:

- General conditions
 - General responsibilities of bidding
 - Fraud and corrupt practices

- Contents and submission of proposal
 - Cost of proposal
 - Number of proposal
 - Eligibility and pre-qualification
 - Bid security
- Performance guarantee
 - Guidelines for submission of proposal: The bidder shall submit the proposal in accordance with the guidelines prescribed in the RFP and ensure that the proposal is complete in all aspects. The GP reserves the right to reject proposals that do not conform to the guidelines prescribed.
- The proposal shall be submitted in three parts, viz.,
 - Part I: Response to pre-qualification requirements
 - Part II: Technical offer and
 - Part III: Financial offer
 - Proposal due date and validity period
 - Late submission of proposal
 - Modifications, substitution or withdrawal of proposal
 - Verification of information and site visit
 - Right to accept or reject any or all bids
- Eligibility and pre-qualification
 - Technical capacity as per eligibility criteria
 - Financial capability
 - Lock in periods
- Evaluation of bids
 - Confidentiality and non-discriminatory process to be defined

- Clarifications
- Evaluation: Part I – Response to pre-qualification requirements
- Evaluation: Part II – Technical offer
- Evaluation: Part III – Financial offer
- Notification and issue of LoI
- Conditions precedent for issue of letter of award
- Authority’s right to accept or reject proposal

Volume II:

Minimum Mandatory Technical & Performance Specifications or Project Information Memorandum

- Brief description of the project
- Scope of work
 - General technical design requirements and standards
 - Specific design requirements and standards for each facility
 - Operation and performance requirements
 - Existing infrastructure

Volume III: Draft Service Contract Agreement

The draft concession agreement specifies various details pertaining to the project in its various articles. Formats for information to be provided by the bidder are specified in the various schedules of the concession agreement. The various Schedules to be included in the concession agreement shall include: Details of project sites; Construction requirement for waste processing facilities; Technical scheme for SWM facility; Service level condition and penalties etc. See annexure 2,3 & 4– for sample service contract agreements

Suggested Contents of Proposals from Bidders

The proposal shall include the following contents in the formats prescribed by the GP authority:

Response to pre-qualification requirement

- Bid security (as defined)
 - Fees for RFP (as defined)
 - Covering letter for proposal submission
 - Details of bidder or bidding consortium
 - Power of attorney of authorized signatory of bidder
 - Memorandum of association (in case of proposal submitted by a consortium)
 - Power of attorney of lead member (for consortium proposal)
 - Format for board resolution of bidder or bidding consortium members
 - Format for non-criminality
 - Format for anti-collusion certificate
 - Details and proof of technical capacity
 - Details and proof of financial capacity
 - Litigation history
 - Certificates from a practising Chartered Accountant in India certifying net worth as per clause 3 (a) supra, along with the documents (if any) as required under relevant clauses.
 - Copy of memorandum and articles of association or registration document
- Technical Offer
- Formats for technical proposal
 - Technical plan for project facilities
 - Details of expert team with curriculum vitae
- Financial Offer
- Project cost break-up sheet indicating costs of all services or components of the contract
 - Detailed break-up of operating costs & revenues

Tender Documents: .The tender documents shall consist of:

- a) A complete description of services to be provided and service level standards to be maintained
- b) A complete specification of the materials to be used and manpower to be as per SLB fixed by the Gram Panchayat

Invitation of Tenders: : All tenders shall be invited in sealed covers by the Panchayat Secretary by a notice in the local newspapers having maximum circulated

in the district,. The tender notice shall also be up-loaded on eGramSWARAJ portal. The notice shall specify,

- a) When and where the draft contract document may be inspected.
- b) The precise form of tendering, i.e manner of quoting rates for each item of work included in the schedule.
- c) When and to whom tenders are to be submitted.
- d) When and where the tenders shall be opened
- e) The amount of earnest money which should accompany the tender
- f) The amount and nature of security required in case the tender is accepted
- g) That the GP reserves the right to reject any or all the tender received without assigning any reason.

Opening of Sealed Tenders: The Panchayat Secretary shall at the time and place specified for the purpose open the sealed covers containing tenders in the presence of such of the tenderers or their authorized agents as maybe present. On opening the tenders, the Panchayat Secretary shall initial all corrections, which may have been made by the tenderer and attested by him. If there are corrections unattested by the tenderer, a note of such corrections shall be made on the tender when it is opened.

Maintenance of Tender Register: After the tender's are opened, they shall be tabulated and posted in the tender register. The Panchayat Secretary shall scrutinise the entries in the register and shall certify that the tabulation is correct with reference to the original tenders. The tender register together with the tenders shall be placed before the Gram Panchayat at its next meeting for disposal.

Acceptance or Rejection of Tenders Procedure: The lowest tender shall ordinarily be accepted. In case it is considered undesirable to accept the lowest tender, the next lowest tender shall be considered. In every case of rejection of a tender clear and convincing reasons shall be recorded .The tenders shall be disposed promptly within six weeks from the date on which they are opened

Agreement: The GP should conclude the contracts through a written agreement.. The terms of contract must be precise and definite, with no ambiguity or room for misinterpretation. The contract shall be initially for a period of one year and can be extended further on observation of satisfactory performance on mutually agreeable financial terms. These contracts should be legally validated by a team of lawyers, which shall be empanelled at the district level.

Customization of Contract Documents/ Agreement: The contract should be executed in the format prescribed by the State Government or in the model format communicated by MoPR. The extracts of Model Contract Agreement given in the MoPR guidelines “Solid Waste Management Service Level Benchmarks & Model Contracts for Gram Panchayats” - given in the Annexure – 2,3 & 4.

PowerPoint Slides

(Ready to use PowerPoint Slides for use by the trainer)

Session – 7

Professionalization of Services

Session Outcome

Upon completion of this session, the participants shall:

1. Recognise the need for professionalising the waste management service delivery at the GP level
2. Identify / restate the Service Level Bench Marks (SLBs) for providing waste management services such as collection, treatment, and disposal
3. Define / Explain the required levels of collection efficiency, treatment efficiency, and disposal efficiency to fall line with the SLBs
4. Organise the required manpower - Skilled and Unskilled - with appropriate training, experience and skill-sets in order to ensure efficient collection, secondary segregation, scientific treatment of waste
5. Identify the local employment potential of sanitation services in general and waste management services in particular

Duration

60 minutes (45 minutes active lecture, followed by 10 minutes discussion, and 5 minutes to transition into the next session).

Method

Lecture with PowerPoint, and vides
Play relevant videos

Materials Required

Relevant lecture with PowerPoint
Videos already selected and ready to play
White Board with markers

Session Outline

- Professionalization of Solid Waste Management Services
- Service Level Benchmarks for Solid Waste Management
- Collection efficiency, treatment efficiency, and disposal efficiency
- Skilled and Unskilled Manpower Requirements
- Local employment potential of sanitation and waste management services

PROCESS

Note to the Facilitator

In this session, the trainer introduces elements that make management of solid waste a professional service. We read in the previous modules that understanding various types of waste by their character to be able to segregate is a professional way of understanding waste management. Similarly, the types of plastics vary in their nature – recyclable and toxic and so on.

Another dimension to professionalization is fixing Service Level Bench Marks (SLBs) for measuring collection efficiency; treatment efficiency and disposal efficiency. In this section we shall see some of those bench marks, which can help determine if a third party agency appointed to carry out solid waste management service delivers on par with standards prescribed by CPCB / SPCB. It also helps gauge if the GP is progressively moving towards achieving 100% collection efficiency and optimum treatment efficiency so that hardly 10% of the residual waste only goes to the landfill.

Professionalization demands trained manpower. Solid waste management service is a specialized job as mentioned earlier in this section, and in the previous sections. Therefore, it requires manpower of skilled and unskilled nature. They need to have undergone appropriate training. The experience and skill-sets required in order to ensure efficient collection, secondary / territory segregation, and scientific treatment of waste are well-defined.

Programmes such as DDU-GKY can be made use of, for training manpower with such skill-sets. There may be some personnel required regularly, and others on call basis. Thus the local employment generating potential of sanitation and waste management

services is considerable. If a GP can identify and train youth / women from poorer sections of the GP, SWM Unit can help some local poor get employment.

TECHNICAL NOTE TO THE TRAINER

- Professionalization of Solid Waste Management Services
- Service Level Benchmarks for Solid Waste Management
- Collection efficiency, treatment efficiency, and disposal efficiency
- Skilled and Unskilled Manpower Requirements
- Local employment potential of sanitation and waste management services

Professionalization of Waste Management Services: Setting up of solid waste management services is a professional activity demanding certain skills and specialized training. To achieve the adopted SLBs and to ensure sustainable service delivery, Panchayat can opt for either carrying out management of the assets by itself or outsource the services to contractors. The professionalization of SWM services has two major advantages: (a) Ensure professional management of the infrastructure created (b) Create local livelihood opportunities. Before professionalization of SWM the GP should take up and complete the following activities:

- a) Role and responsibilities GP in providing waste management service
- b) Constitute Village Water & Sanitation Committee and train its members (VWSC)
- c) Prepare Swachhata Action Plan for the GP (with annual and perspective plans)
- d) Create Awareness on roles of households, and other bulk waste generators on segregation, and other issues
- e) Fix the (differential) user charges towards O&M for cost recovery
- f) Obtain approval from the Executive Committee / Gram Sabha / other competent authority as the case may be.

Service Level Benchmarks for Solid Waste Management (SLB): Towards effective management of solid waste management services, the MoPR has brought out SLBs which can be used to closely monitor the effectiveness of service delivery. Meeting these

minimum service level standards would encourage the citizen to bear the O&M costs. The SLBs for different parameters to gauge management of solid waste as shown below

SWM: SLBs

Sl.No.	Parameter	Indicators	Bench mark
1.	Coverage	HHs and establishments having access to HH level treatment facility or community level treatment facility	100%
		HHs segregating the dry and wet waste	100%
2.	Segregation	Institutions and businesses segregating the dry and wet garbage	100%
3.	Disposal of animal waste	Provision for scientific environmentally responsible treatment of animal waste	Yes
4.	End treatment	Scientific disposal / recovery of non-biodegradable wastes (plastic, glass, metal, etc.)	100%
		Scientific treatment of biodegradable waste	100%
5.	Safety measures	Adoption of safety measures by concerned workers	100%
6.	Collection	Efficiency of collection	100%
		Frequency of collection	As per norm
7.	Use of treated waste	Is the treated waste reused?	Yes

The service level bench mark mainly focuses on the Collection efficiency, treatment efficiency, and disposal efficiency.

Skilled and Unskilled Manpower Requirements

SWM requires trained manpower – both unskilled and skilled. The table given below indicates the type of personnel required, their number, nature of engagement, educational qualification preferable, and experience, if any required. This can serve as a reference tfor GPs to discuss and decide on HR Requirements.

Personnel	No. Required & Nature of Engagement	Educational Qualification	Experience	Job Description
Sweeper	-Nos. ² Full time	NA	Should be physically fit for sweeping of roads and road sides.	<ul style="list-style-type: none"> Sweeping of the roads and road sides and dumping of the waste collected to designated

				<p>location(S)/into the cart for solid waste collection.</p> <ul style="list-style-type: none"> • In case littering is observed in any specific area, informing authorities for undertaking awareness drive etc.
Driver(if the collection is done using a vehicle	-Nos.	Literate(preferred) possession of valid driving license	6months in driving of goods carriers, basic repairs and maintenance of vehicle.	<ul style="list-style-type: none"> • Driving the dedicated vehicle for collection of waste as per schedule. • Informing authorities for any repair and maintenance, refueling, RTO clearances of vehicle, as required.
Waste collector	-Nos ³ Full time	Literate(preferred)	6 months to 1year in collection of waste door-to door. Conversant with different categories of solid waste-dry waste and hazardous, safety gear usage.	<ul style="list-style-type: none"> • Ensuring that solid wastes are segregated at source and informing with the concerned people, if waste is not segregated. • Collecting solid wastes (Bio-degradable, non-biodegradable, hazardous wastes, etc.)In the respective compartments of the cart/vehicle from household, institutes, public places, vegetables markets, open dumping sports, etc., as per the schedule. • Collection of medical wastes from hospitals, dispensaries, etc. as per the schedule. • Regular cleaning of

				<p>containers from card/vehicle before door to door collection and after unload in segregation shed.</p> <ul style="list-style-type: none"> • Maintenance of cart, as per the schedule and requirement.
Labour for segregation shed and end treatment unit	-Nos. Full time	Literate (preferred)	6months to 1 year secondary segregation method. Conversant with identification of sub-categories of dry, wet and hazardous waste usage if safety gears. Acquainted with WASH practices.	<ul style="list-style-type: none"> • Checking proper segregation of bio-degradable and non-biodegradable waste. • Segregation of non-biodegradable waste as plastic , building material, glass, rubber, cloth, leather, paper, wooden cardboard etc. • Segregation of non-recyclable material and its transport to scientific landfill/incinerator, as provided in CPHEEO manual. • Operating, loading and unloading of treated dry waste from the baling machine, if available. • Maintaining conducive conditions for functioning of treatment unit e.g. moisture control, replenishing of media, culture, etc.for composting unit. • Maintenance of the all the electro mechanical devices, light fittings, etc. • Maintaining sanitary

				conditions in the premises.
Supervisor	-Nos. Full time /Part time	Preferably ITI trade for mechanic	4-5 years in record keeping stock maintenance, basic accounting conversant with the operation and maintenance of components of treatment plant, WASH practices.	<ul style="list-style-type: none"> • Finalize the route map for collection of waste. • Ensuring 100% and timely collection from households, institutes, public places, vegetables markets, roadside garbage bins, etc. • Monitoring the use of safety equipment by employees at the time of collection, segregation and waste handling during transportation. • Stock maintenance of the consumables and informing the authorities about the requirement in advance. • Ensuring the functionality of all the components in the unit⁵ and co-ordinating with the respective personnel (carpenter, plumber, collection vehicle⁶, etc.) • Ensuring the segregated wastes are safely transported to the allotted treatment plant. • Checking of the complaint register and taking corrective actions. • Coordinating with technology experts,

				<p>as required.</p> <ul style="list-style-type: none"> • Co-ordinating with vendor on supply and pick-up of the treated waste. • Supervising the operation and maintenance process as per the standard operating procedure to the labours. • Informing GP authorities to create awareness, if waste is not being segregated at source.
Electrician	On call as per requirement (within 24hrs after requirement raised)	Diploma in electrical engineering/full time ITI course of electrician.	2years in electrical works. Major repairs of electromechanical devices specially pumps, motors, etc.	<ul style="list-style-type: none"> • Trouble-shooting of any issues related to motors, pumps etc. • Routine inspection of electro-mechanical devices. • Checking and rectifying all the electrical fittings in the premises.
Mechanic	On call as per requirement (Within 24 hrs after requirement raised)	Diploma in mechanical engineering.	2years in mechanical works, major repairs of electro-mechanical devices specially pumps, motors, etc.,	<ul style="list-style-type: none"> • Trouble –shooting of any issues related to leakages, pumps, shredder etc., if applicable.
Plumber	On call as per requirement (within 24hrs after requirement raised)	Preferably ITI trade for plumber	1year in plumbing services, especially sewage drains and sanitary fittings	<ul style="list-style-type: none"> • Corrective measures against leakages in pipelines, taps, flush, etc.
Painter	On call as per requirement within 24hrs after requirement raised)	Preferably ITI trade for plumber	1 year in basic painting works and water proofing	<ul style="list-style-type: none"> • Annual/biannual painting of the treatment plant, segregation platform, and any other equipment as planned by GP.

Local employment potential

The HR requirement for management of solid waste within a Gram Panchayat is an indication of the employment generating potential of SWM Unit in villages. The SWM Units require such trained – skilled and unskilled manpower. The GPs can engage local youth, and destitute women and others poorer sections to get trained under DDU-GKY / Skilling Mission and become eligible to work in such units. This can be a source of income, which is likely to last uninterrupted so long as they are able to run it as a viable unit.

PowerPoint Slides

(Ready to use PowerPoint Slides for use by the trainer)

Session – 8

Monitoring Service Delivery

Session Outcome

Upon completion of this session, the participants shall:

1. Discuss the broad parameters and essential indicators of service level bench marks for a GP level SWM Unit
2. Explain the rationale behind the indicators and methods of measurement so as to inspect and judge if private service providers deliver as per deliverables
3. Illustrate how periodical use of monitoring formats can steer the GP towards becoming a Zero Waste Panchayat
4. Value the importance of continuous engagement with the stakeholders for operational sustainability of the system

Duration

60 minutes (45 minutes active lecture, followed by 10 minutes discussion, and 5 minutes to transition into the next session).

Method

Lecture with PowerPoint, and vides
Play relevant videos

Materials Required

Relevant lecture with PowerPoint
Videos already selected and ready to play
White Board with markers

Session Outline

- Monitoring Indicators and Efficiency levels
- Service Delivery Effectiveness
- A Handy Format to Monitor Progress
- Continuous Engagement for Sustainability

PROCESS

Note to the Facilitator

The trainer shall discuss the broad parameters and essential indicators of service level bench marks for a GP level SWM Unit. Explain the rationale behind the indicators and methods of measurement so as to inspect and judge if private service providers stick to the deliverables. They include all the households, shops and establishments in the GPs are covered; and 100% waste collection takes place. Regularity of service has been ensured. Everyone of the service user hands over segregated waste only. There is no mixed up garbage accepted.

The waste collected is scientifically treated and a usable by-product is generated. It is recommended that biogas and compost generation should be undertaken for treatment of bio-degradable waste. Similarly, all the recyclable material should be treated in material recovery facility (waste to resource concept). Only the inert / residual wastes should be incinerated and dumped in scientific landfills.

The sanitary waste is properly disposed in a locally constructed incinerator or passed on to the local Sub Health Centre or Primary Health Centre to go along with medical waste incineration.

All concerned workers to adopt safety measures for environmental and health benefits, and are sent for periodical medical check-up. The workers use the tools and equipment so as to avoid having to touch waste, as far as possible.

The GP should take a 'waste-to-resource approach'. It can help villages turn the waste management challenge into an opportunity and sustainably manage their solid waste, by generating a portion of income from such revenues. Train the GPs to value the importance of continuous engagement with the stakeholders for operational sustainability of the system.

TECHNICAL NOTE TO THE TRAINER

Solid Waste Management: Monitoring Indicators

No	Parameter	Indicator	Rationale for the indicator	Method of measurement	Unit	Standard Value
1.	Coverage	Household and establishments having access to on-site treatment facility or community level treatment facility	It is an essential and critical starting point in the entire chain of scientific SWM services Waste-Free clean roads and drains, scientific treatment of waste so as to maximize treatment, recycling and disposal can all be achieved in a sustainable manner only if collection of waste is sustained.	(Households and establishments that have access to HH- or community level solid waste management services/total no of households and establishments in the village) x100	%	100%
2.	Segregation	Segregation of solid waste	Segregation of waste at source, that is, HH, business and institutions, is essential so that specific treatments can be applied to dry and wet wastes. Also, segregation of waste at source is easier and low cost.	•(No. of HHs segregating the dry and wet garbage / total no. of HH)x100	%	100%
				• No. of institutions and business segregating the dry and web garbage / Total no. of institutions and businesses	%	100%
3.	Collection	Efficiency and frequency of collection	Collection efficiency is a key performance indicator to measure the extent of collected and uncollected waste. The collection efficiency is largely dependent on the regularity of waste collection.	• Total waste collected / total waste generated (excluding recycling or processing at the generation point)x100	%	
				• Is the frequency of waste collection as per the GP norm		Yes

4.	Animal Waste	Scientific environmentally responsible treatment of animal waste	Animal waste needs to be stabilized using some scientific treatment before disposing it into the environment, in order to avoid pollution, it can be used as a composting culture or manure.	Is animal waste scientifically treated prior to disposal?		Yes
5.	End Treatment: Scientific disposal of solid, medical and menstrual waste	5.1. Scientific disposal / recovery of non-bio-degradable waste (metal, plastic, glass, etc.)	This is a critical performance parameter from an environmental sustainability perspective, which measures whether the waste is scientifically treated and a usable by-product is generated. It is recommended that biogas and compost generation should be undertaken for treatment of bio-degradable waste. Similarly, all the recyclable material should be treated in material recovery facility (waste to resource concept). Only the non-recyclable wastes should be incinerated and dumped in scientific landfills	(No. of HH connected to HH level treatment units + No. of HH connected to community level collection and treatment units / total no. of HHs) x 100	%	100%
5.2. Scientific treatment to bio-degradable waste						
5.3. Scientific disposal of medical waste		Measures to ensure the safe and environmentally sound management of medical wasters can prevent adverse health and environmental impacts from such waste			<ul style="list-style-type: none"> • Medical facilities with an access to functional medical waste treatment unit (at source or outsourced) / total no. of medical facilities in the GP • (Amount of medical waste 	%

				treated / amount of medical waste generated) x100		
	menstrual waste	5.4.Scientific disposal of menstrual waste	Improper management of menstrual waste can lead to health and environmental hazards. It is desired that all the schools have incinerators / bins	(No. of women having access to menstrual waste treatment units generated / total no. of women requiring the facility) x100	%	100%
6.	Safety Measures	Adoption of safety measures by concerned workers	It is necessary for all concerned workers to adopt safety measures for environmental and health benefits	(Number of workers using safety measures like masks, hand gloves etc. While handling the waste / total no. of workers for SWM) x100	%	100%
7.	Use of treated waste	Use of treated waste	A waste-to-resource approach can help villages turn the crisis into an opportunity and sustainably manage their solid waste.	Is the treated waste used in the village ?		Yes

‘Zero Waste’ as a Measure of Effective Service Delivery

Illustrate how periodical use of monitoring formats can steer the GP towards becoming a Zero Waste Panchayat. This can help demonstrate the service delivery effectiveness of the GP / contractor. In order to keep track of the progress a given GP is making in waste management services a simple format is given at annexure -5. This format filled in monthly can help capture progress in terms of collection efficiency, treatment efficiency and disposal efficiency. It can also indicate the percentage of progress made from baseline, and the mile stone a GP has to make before it touches the mark of claiming to be a Zero Waste Panchayat. See format at Annexure - 5

PowerPoint Slides

(Ready to use PowerPoint Slides for use by the trainer)

Session – 9

Group Work

Session Outcome

Upon completion of this session, the participants shall:

1. Apply the knowledge gained during the training in order to customise a service contract agreement that will be suitable to the GP one comes from
2. Define service level bench marks, and determine the terms and conditions for deploying private service providers into the task of waste management at GP level

Duration

60 minutes

Method

GD

Materials Required

Relevant lecture with PowerPoint

The Service Contract Agreement papers (hard copy and soft copy)

Access to computers / laptops for everyone of the participant (with soft copy of the Service Contract Agreement forms)

White Board with markers

Session Outline

- Customising the Service Contract Agreements (GD)

PROCESS

Note to the Facilitator

The trainer shall form homogenous groups of participants with 4 – 5 members in each group, and explain the purpose of the Group Discussion. The purpose is they shall be handed the Service Contract Agreement copies. The participants in groups should read every clause, and customize / modify each clause / each section to suit their local context. If they were to choose one of the typologies, which one would they choose for their GP, and how they would want each clause / each section to read.

The trainer can hand each one of the participant a hard copy of the Service Contract Agreement. They shall make homogenous groups – meaning groups that choose Type – 1, Type – 2, Type – 3 of the services to be contracted out. Accordingly, they can choose the group they want to be in. It will also be a good idea if three or four GP functionaries from the same village form one group. It will help them to discuss clearly bearing in view the context of the GP they come from.

The trainer needs to be thorough with the contents of each typology of contract agreement, to be able to clarify any doubts raised. The discussion should help progressive learning among the participants. They must be able to understand and relate it to their context. Generally because of the involvement, the participants tend to develop a sense of ownership of the document. This is what is expected of this session.

TECHNICAL NOTE TO THE TRAINER

PowerPoint Slides

(Ready to use PowerPoint Slides for use by the trainer)

Session – 10
Plenary Presentations & Concluding

Session Outcome

Upon completion of this session, the participants shall:

1. Demonstrate their ability to get into service contracts with private service providers so as to put in place sustainable waste management system at GP / cluster of GPs

Duration

60 minutes

Method

The outcome of the GD in the previous session comes from plenary presentation in this session

Each group comes up for presentation

Presentation can be made through LCD Projector (if the participants had worked with a soft copy of word document)

Use flip charts, if computers / laptops are not available for groups.

Materials Required

Clip boards

LCD Projectors

Relevant lecture with PowerPoint

White Board with markers

Session Outline

- Plenary presentation by Groups
- Summing up
- Concluding

PROCESS

Note to the Facilitator

Plenary presentation by Groups: The trainer invites groups (one by one) to make presentation. Since groups might have chosen to work on different typologies, it becomes an opportunity for everyone to listen to the details of sections and clauses in each typology. Thus, the discussion should help progressive learning among the participants of each typology of Service Contract Agreement. This helps them to relate it to the context of the GP each one comes from. Now that the participants are coming for presentation after one-hour thorough discussion, they tend to explain and defend each section and clause. This would serve as a proof of their understanding of the subject, their involvement, and sense of ownership to the document. When someone from other group seeks a clarification, or asks a critical question, the explanation or the defense the group members come up with will demonstrate their conviction in the engagement of third party agencies for solid waste management service. This is what is expected of this session.

Summing up: The trainer can sum up the discussion that the GP functionalities can discuss about each type of Service Contract Agreement in the Executive Committee of the respective GPs. They can invite some external members / advisors if required. They can consider deciding on which typology might be suitable in the context of their GP.

Concluding: The trainer can conclude by reiterating the range of functions a GP is expected to perform, which throws open the opportunities for development to take place in multiple spheres. However, the manpower, time and capacity of a GP may not be sufficient to be able to carry out everything by themselves. In such situations the GP must consider contracting out such services to professional private agencies. Such invitation extended to private agency should be done as per procedure in a fair and transparent manner. In the context of a GP, the water and sanitation related services take a lot of time, and demands professional involvement. Thus, the training has introduced a range of Service Contract Agreements possible. It's in the ingenuity of the GP concerned to decide on one or the other of the engagement type.

TECHNICAL NOTE TO THE TRAINER

PowerPoint Slides

(Ready to use PowerPoint Slides for use by the trainer)

A Model Bylaw for Solid Waste Management in Gram Panchayats

Bylaw forGram Panchayat.....Panchayat Union ofdistrict.
Approved by Gram Sabha on...../...../.....2021

PART – I

General

1. The jurisdiction of the bylaw is limited to solid waste management of the villages and hamlets within Village Panchayat.
2. These bylaws are prepared keeping in view the Solid Waste Management Rules – 2016 and Plastic Waste Management Rules – 2018 issued by the Ministry of Environment, Forest and Climate Change (notified in the Gazette of India on 8th April 2016 & 27th March,2018).
3. These bylaws are prepared keeping in view the Constitution of India (Articles 243G, 243H, 243I, and 280) and the Guidelines of the Swachh Bharat Mission (G) Phase – II for solid waste management in rural areas.
4. The Village Water and Sanitation Committee (VWSC) is hereby appointed Executive Authority to plan, collect, treat and dispose kitchen wastes, and other domestic waste generated by households, shops and other establishments within the boundaries of the Panchayat.
5. The VWSC shall put in place a proper system for solid waste management for this GP. It shall fix terms and rates under which wastes generated by residents shall be collected and disposed in a manner that is healthy, and overall cleanliness of the village shall be maintained.
6. Solid waste generated by households, shops and establishments, and marriage halls within the GP shall be handled by a team of sanitation workers trained and appointed by the VWSC with the approval of the GP on terms set out in this bylaw (and related rules to be intimated when required).
7. Differential rates will be applicable to different category of residents such as households, tea stalls, village restaurants and eateries, marriage halls, schools and offices if any, vegetable markets, mutton and chicken stalls, grocery shops etc.
8. The rates set out in this bylaw are hereby imposed on all category of waste generators in the village and the rates shall be levied and collected in accordance with a tariff fixed (See 2.5).
9. The rates shall be revised once a year to reflect changes in the cost incurred in solid waste management services
10. Revenue collected for providing solid waste management (SWM) services shall be used only for the purpose of operation and maintenance of the said services

including the workers' salary, employed additionally (or made to work for extra hours) for this purpose.

11. Where the GP decides to engage a third party (professional waste management agency) to manage solid waste on behalf of the GP, the GP can do so.
12. Any person who behaves in breach of this bylaw shall be liable to a fine as stipulated in this bylaw (as mentioned in 2.5 of this by-law).

PART – II

1. The GP shall do a survey and sort out residents under different categories (See User Category below). There will be a series of community education programmes conducted with the help of Block level staff of the government (or an NGO) involved in sanitation promotion (SBM) activities.
2. Residents, shops and other establishments of the GP shall be intimated which category they fall under for the purpose of payment of service charges for SWM – preferably monthly (or as agreed upon).
3. The unit considered as house for the purpose of House Tax shall be considered as household in this case also.

2.1 User Category

- i. Households
- ii. Tea stalls
- iii. Village restaurants and eateries
- iv. Marriage halls
- v. Vegetable markets
- vi. Mutton and chicken stalls / Fish markets
- vii. Grocery shops
- viii. Schools and offices, if any
- ix. Temples, churches, mosques etc. (unless they have their own waste disposal arrangement)
- x. Others

It is at the discretion of the VWSC, that a destitute woman or aged person running a small petty shop with an investment of less than Rs.1000 (one thousand only) may be exempted from paying for waste management services, provided s/he already pays as a household. This exemption is not applicable to those who run a village eatery, chicken/mutton and fish stall, unless they have their own arrangement for disposal of wastes, which is acceptable as scientific treatment.

2.2 Technical Stipulations

1. The Panchayat shall pass a resolution banning the use of use-and-throw carry bags, and use-and-throw tea cups and seek the cooperation of community to carry

reusable cloth bags, and insist on shopkeepers to use only biodegradable alternatives, in order to help the buyers who forget to bring cloth bags.

2. Every household shall use three coloured baskets – one for WET WASTE, second one for DRY WASTE, and a third one for sanitary wastes. Households will be educated on which waste goes into which bin / basket, and the intervals at which collection vehicle / cart visits them.
3. Primary Segregation shall take place at the source where waste is created (e.g. household level / at eatery etc.). Secondary segregation shall take place at SWM shed of the GP by sanitation workers trained and appointed for this purpose / or by a third party agency to whom such service has been contracted out.
4. The responsibilities of each category of SWM service users are provided separately in the by-law.
5. Special arrangements shall be made for cleanliness during temple festivals and local festivals. The temple committee or festival committee shall include in their expenses budget to clean up the garbage generated during such events. The same holds good for marriage houses.

2.3 Inspection

1. Respective ward members of Panchayat along with the members of VWSC (or a supervisor appointed for this purpose) shall pay inspection visits to make sure that the community members, shopkeepers and others keep their surrounding clean. And no one dumps wastes in street corners or in empty plots / common areas.
2. They shall also personally visit in order to educate houses / shops that repeatedly mix up, or do not cooperate as reported by the sanitation workers.

2.4 Non-compliance

3. Where some households / shopkeepers are found not abiding by the Panchayat norms, and are chucking waste on the street corners or in some vacant place in residential areas shall be liable to pay penalty as decided by the GP.
4. In the event of a resident's persistent non-cooperation, the Panchayat may take the extreme step of cutting off other services like drinking water supply etc.

2.5 Payment for Services

The tariffs set for the SWM services with respect to different users are suggested below. However, the best way to do this is each GP can work out a budget (of likely expenditure to be incurred on SWM, and accordingly work out the service charges [rates] for each category of service users, which should serve as income to be able to meet the expenditures). The following is a suggestive tariffs for different user categories.

1. The service charges for SWM shall be payable to the sanitation worker (or sanitation supervisor) at the door steps of service users before the 5th day of every

month, unless otherwise specified. This is easier to collect and easier to pay. A receipt for the amount paid shall be insisted on by the residents who pay.

2. Alternatively, the service charges may be paid at GP Office before the 5th of every month in advance.
3. Payment for SWM service under the terms and conditions laid down in the bylaw if not paid by the party concerned within the time stipulated shall be recoverable in the same manner as house tax.
4. Waste baskets given for SWM purpose shall not be put to any other use, causing SWM to suffer. In such an occurrence the amount spent on the baskets shall be recovered at double the price.
5. Household not willing to involve themselves in primary segregation can do so, provided they are prepared to pay Rs.150/pm, instead of the regular Rs.50/pm.
6. However, those found chucking waste at the streets/street corners shall be liable to pay a penalty of Rs.500 every time they err.

Sl.	User Category	Service Charge (monthly)	Remarks
1	Households	Rs.50 /Rs.150	Payable monthly (Type – A) (If a household does not want to spend time on primary segregation, they can opt to do so on additional payment of Rs.100 every month. They shall be known as Type –B.
2	Tea stalls	Rs.50	Payable monthly
3	Village restaurants and eateries	Rs.100	Payable monthly
4	Marriage halls	Rs.500	Payable after every marriage
5	Vegetable markets	Rs.50	Payable monthly
6	Mutton & chicken stalls / Fish markets	Rs.200	Rs.50 Payable weekly
7	Grocery shops	Rs.50	Payable monthly
8	Schools and offices, if any	(as decided)	Payable monthly
9	Temples, churches, mosques etc. (unless they have their own waste disposal arrangement)	(as decided)	Collected from the community along with the collection made for temple festivals / local festivals.
10	Others (such as dispensaries)		

2.6 Penalty

1. Anyone wilfully or negligently throwing waste on the street shall be considered to have violated and shall be punished with a fine of Rs.500 in the case of households and shops; and Rs.2000 in the case of marriage hall or as decided by the VWSC.

2. The GP/VWSC may also decide differential penalties in the case of one time violation, and repeated non-compliance / negligence.

3.1 Responsibilities of Households / Waste Generators

The following are responsibilities of households and others except marriage halls.

1. Each household shall segregate waste into wet waste (kitchen waste & food scraps) and dry waste (other waste) and put in the bin given specifically for each purpose. This is called primary segregation, which shall take place at the household /shopkeepers level. Those who do not want to segregate waste can do so on extra payment as prescribed by the GP. Those who repeatedly give mixed up (both dry waste and wet waste) shall be automatically classified under Type – B and charged accordingly.
2. As far as possible leftover food items such as fish bones, mutton and chicken bones may be given to pet cats / dogs, if available at the households. This is a way to deal especially with leftover food at household level. Otherwise, they may be securely wrapped in a newspaper and handed to the sanitation workers (preferably with a green X [cross mark] on it). It helps easy identification of what is inside.
3. Vegetables peels, fruit peels, egg shells, used tea leaves, leftover cooked vegetables on the plat may be put in wet waste bin. But never knot it. Households are also encouraged to prefer home composting of kitchen waste.
4. It is always good to wash inside of a milk pocket with water. That way, the milk in frozen form may find its way to your milk pan. Washed milk cover renders it easy for the sanitation workers to deal with it, as it does not smell. Moreover, just in case an unwashed milk cover ends up on the street, it happens that calves [small ones of a cow] tend to eat up the cover because of the milk smell, which over the years becomes dangerous for the animal.
5. Certain items such as used sanitary pads, children's nappies, and condoms shall be securely wrapped in newspapers, or some papers available (put a red X [cross mark]) before it is handed to the sanitation workers, who shall take them to sanitary pad incinerator or bury in a landfill. Marking helps easy identification so that the sanitation worker shall not open it. It is good to use a third basket (Red colour or Black colour) to discard such items. This is part of hazardous waste generated as household level.

6. Putting kitchen waste (vegetable peels etc.) in carry bags and knotting it should be avoided. Use torn newspapers / dry leaves at the bottom of Green basket, so as to avoid these things getting stuck, instead of using use-and-throw carry bags.
7. The sanitation workers (in uniform & cap) shall visit every household with a cart / tri-cycle, and ring a bell to let the households / shops in that area get to know that the waste collection vehicle has arrived. It is the responsibility of each household to give the segregated wastes to the sanitation workers, who shall empty each basket in separate containers they bring / in partitioned vehicles.
8. No waste generator shall throw, burn or burry the solid waste generated by him, on streets, open public spaces outside his premises or in the drain or water bodies.
9. All waste generators shall pay such user fee for solid waste management, as specified in the by-laws of the local bodies.
10. No person shall organise an event or gathering of more than one hundred persons at any unlicensed place without intimating the local body, at least three working days in advance and such person or the organiser of such event shall put in place waste management arrangement or ensure segregation of waste at source and handing over of segregated waste to waste collector or agency as specified by the Gram Panchayat. The GP may levy extra charges going by the amount of waste generated.
11. Every street vendor and eateries etc. shall keep suitable containers for storage of waste generated during the course of his activity such as food waste, disposable plates, cups, cans, wrappers, coconut shells, leftover food, vegetables, fruits, etc., and shall deposit such waste at waste storage depot or container or vehicle as notified by the Gram Panchayat.
12. All resident welfare and market associations shall, within one month from the date of notification of these rules and in partnership with the local body ensure segregation of waste at source by the generators as prescribed in these rules, facilitate collection of segregated waste in separate streams, handover recyclable material to the waste collection arrangement made by the GP or to some authorised recyclers or waste pickers.
13. The complaints, if any, from the residents may be written in the complaints book available in the waste collection vehicle. The residents may also call up the mobile number available in the cash receipt that they received the previous month.
14. Similarly, the sanitation workers shall also keep note of households / shopkeepers who do not cooperate (not abide by the bylaw) and report to the GP/VWSC.

3.2 Responsibilities of Sanitation Workers

1. The sanitation workers shall collect waste primarily segregated at the household level, and after reaching the segregation shed allotted, shall involve in secondary

segregation, where they segregate (different types of) recyclable items from the items that must go for composting etc.

2. Households making direct payment of service charges at Panchayat Office is to be promoted as a system. Where some shopkeepers feel uncomfortable, the sanitation

workers shall collect service charges from such households and give account to the Panchayat Secretary to keep accounts, and follow up those who have not paid. Those who pay shall insist on receipts for the amount paid at the GP.

3.3 Responsibilities of VWSC / Gram Panchayat

1. Arrange for door to door collection of segregated solid waste from all households including slums and informal settlements, commercial, institutional and other non-residential premises and ensuring hygienic conditions.
2. Collect separately waste from sweeping of streets, lanes and by-lanes daily, or on alternate days or twice a week depending on the density of population, commercial activity and local situation;
3. Transport segregated bio-degradable waste to the processing facilities like compost plant, bio-methanation plant or any such facility. Preference shall be given for on-site processing (home-based) of such waste;
4. Direct and educate the waste generators not to litter i.e throw or dispose of any waste and to segregate the waste at source as prescribed under these rules and hand over the segregated waste to authorised the waste pickers or waste collectors authorised by the local body
5. Arrange for composting of wet waste (type of composting as determined early on).
6. Setup material recovery facilities or secondary storage facilities with sufficient space for sorting of recyclable materials to enable informal or authorised waste pickers and waste collectors to separate recyclables from the waste and provide easy access to waste pickers and recyclers for collection of segregated recyclable waste such as paper, plastic, metal, glass, textile from the source of generation or from material recovery facilities.
7. Arrange segregation and sale of recyclable wastes, and send them to Plastic Waste Management Unit in the block.
8. Identify waste deposition centres for domestic hazardous waste and give direction for waste generators to deposit domestic hazardous wastes at this centre for its safe disposal.
9. Provide training on solid waste management to waste-pickers and waste collectors;
10. Involve communities in waste management and promotion of home composting, bio-gas generation, decentralised processing of waste at community level subject to control of odour and maintenance of hygienic conditions around the facility;
11. Phase out the use of chemical fertilizer in two years and use compost in all parks, gardens maintained by the local body and wherever possible in other places under its jurisdiction.
12. Make sure hardly 10 – 15% ends up in a sanitary landfill. And it should not be considered as a place for dumping. It should be a sanitary landfill.
13. Make sure the village streets, street corners, and vacant places are clean. And everyone cooperates to maintain cleanliness. Frequently inspect vulnerable spots.

14. Facilitate construction, operation and maintenance of solid waste processing facilities and associated infrastructure on their own or with private sector participation or through any agency for optimum utilisation of various components of solid waste adopting suitable technology.
15. Prescribe from time to time user fee as deemed appropriate and collect the fee from the waste generators on its own or through authorised agency
16. Promptly attend to community grievances so that their cooperation can be counted on.
17. Sustain the work, and make it a regular habit among the residents not to litter in open places / in drainage canals etc.
18. Educate workers including contract workers and supervisors for door to door collection of segregated waste and transporting the unmixed waste during primary and secondary transportation to processing or disposal facility;
19. Provide personal protection equipment including uniform, fluorescent jacket, hand gloves, raincoats, appropriate foot wear and masks to all workers handling solid waste and the same are used by the workforce
20. Procurement of suitable sites for setting up solid waste processing facility and sanitary landfill facilities
21. levying of spot fine for persons who litters or fails to comply with the provisions of these rules and delegate powers to VWSC to levy spot fines as per the bye laws; and create public awareness through information, education and communication (IEC) campaign and educate the waste generators on the following; namely:-
 - not to litter;
 - minimise generation of waste;
 - reuse the waste to the extent possible;
 - practice segregation of waste into bio-degradable, non-biodegradable (recyclable and combustible), sanitary waste and domestic hazardous wastes at source;
 - practice home composting, vermi-composting, bio-gas generation or community level composting;

Annexure - 2

CONTRACT FOR COMPREHENSIVE SOLID WASTE MANAGEMENT IN _____ GP

1. Contract parties and date of contract

This contract is made and executed on this _____ day of _____ 20_____, at _____.

Between

(Gram Panchayat Name)_____ & (Block Name)_____ (Contractor / Firm)

(District)_____

2. Introduction:

The contract aims to improve management of solid waste from its collection to its treatment – as per the scope of work provided below in GP. The service provider / Contractor shall be responsible for all the routine operations, as well as general maintenance of the facilities such as segregation shed and treatment unit for the stipulated period of time as per the scope of work.

Information about the GP (demography, structure of the GP, nature of waste generated, details of treatment units, etc.) will be added here.

3. Definitions:

Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

1. “Contractor” means the successful bidder or the service provider selected for performing the task mentioned in the contract.
2. “Application Law” means the laws and any other instruments having the force of law in the respective State related to Panchayats’ or in India (as they may be issued and in force from time to time).
3. “Contract” means the contract signed by the Parties.
4. Government means the Government of India/ respective State Government.
5. “Party” means the GP or the Contractor as the case may be & Parties means both of them.

6. “Services” means the works to be performed by the Contractor pursuant to this contract for the purposes of the Operation and Maintenance of the system.
7. “Third Party” means any person or entity other than the Government, the GP and the Contractor.
8. “Solid waste” includes commercial, residential and other waste generated within the limites of the GP. It will include biodegradable waste, non-biodegradable waste (including plastic, metal and menstrual waste) and hazardous waste (including medical waste and e-waste).

4. Scope of work:

The scope of work covers collection, transportation and end treatment of solid waste in ___ households, ___institutions and ___public places within___ number of villages and – habitations in GP as per the scope defined below.

The Contractor shall be responsible for comprehensive solid waste management including collection, transportation, segregation, treatment and scientific disposal of solid waste. The contractor shall provide personnel of required qualifications and experience, vehicles equipment, safety gears, etc., for smooth functioning of the system. If required, the Contractor shall coordinate with special service providers for treatment and disposal of hazardous solid wastes. The indicative task list for the contract is provided below-

4.1. Collection of waste:

- Collecting solid wastes (biodegradable waste, non-biodegradable waste including plastic, metal, menstrual waste and hazardous waste including medical waste, e-waste) from all the houses, institutes, public places, businesses, open dumping sites, etc. as per the schedule.
- Periodic sweeping of roads / roadsides and collection of waste.
- Collection of medical wastes from hospitals, dispensaries, etc. as per the schedule.
- Providing collection cart / vehicle with separate compartments of biodegradable, non-biodegradable and hazardous wastes.
- Ensuring wastes segregated at source, are collected in the respective compartment.
- Transporting the wastes to Segregation shed, without littering.
- Maintenance of the collection cart/ vehicle, as per the schedule and requirement.
- Periodic painting of the cart with clear lables for each compartment and IEC messages as instructed by the GP.

4.2. **Segregation of waste:**

- Checking proper segregation of bio-degradable and non-degradable waste.
- Segregation of collected non-biodegradable waste as plastic, building material, glass, rubber, cloth, leather, paper, wooden cardboard etc.
- Baling the segregated non-biodegradable waste during secondary segregation as per the categories, if applicable.
- Transportation of segregated waste for treatment according to their nature bio-degradable waste to representative treatment site, plastic waste to material recovery facility etc.
- Maintenance of the segregation shed – cleaning and periodic painting (if required), maintaining the electro mechanical devices (conveyer, bailing machine, light fitting, etc).

4.3. **End treatment and disposal**

4.3.1. Biodegradable wastes

- Application of standard operating procedure as per requirements of the technology or conditions mentioned by the service provider.
- Operations of equipment / devices for treatment of biodegradable wastes as per approved schedule.
- Maintenance of Civil structure / equipment / devices as per approved schedule – replenishing of media and culture for composting, cleaning periodic painting (if required), maintaining the electro mechanical devices, maintaining of sufficient ventilation and lighting in the premises, etc.
- Conducting necessary minor repairs of structure / equipment / devices Ensuring use of safety equipment by employees during handling of wastes.
- Coordination with technology experts, if required Coordination for marketing and sale of by-products.

4.3.2. Non-Biodegradable wastes

- Transportation of the segregated non-biodegradable waste to the respective vendors, treatment units, material recovery facilities, as applicable.
- Stacking of non-recyclable wastes and its transport to the scientific landfill area, incinerator, if applicable.

4.4. **Grievance redressal**

- Maintaining a complaint register for recording date wise details of the complaint.
- Identification of cause of the complaint and its redressal.

4.5. **Record maintenance**

Maintaining following records as per norms-

- Quantity of wet waste received from segregation shed and quality of treated waste and monitoring seasonal variation in the quality.
- Quantity of compost sale and stock at hand.
- Documentation of billing, payment recovery, delivery of treated waste

5. **Deliverables**

- Efficiently and timely collection of solid wastes in separate compartments of from all houses, institutes, public places, businesses, etc. as per the schedule.
- Segregation of waste and transporting the segregated waste to the respective treatment units.
- Scientific disposal of solid waste-treatment of biodegradable waste, transportation of non-biodegradable waste to the respective vendors, treatment units, material recovery facilities, scientific landfill area etc.
- Monthly report including –
 - Vendor details for each type of waste, quantity of waste transported to the respective facility schedule for transport of waste to the vendor, etc.
 - Details of minor repairs and requirement of major repairs / replacements.
 - Report of mishap if any.(Due considerations shall be given in the deliverables in case in case of natural calamities like drought, flood, earthquake etc.,)

6. **Terms and Conditions :**

6.1. The contractor expressly agrees that the decision of the GP in this regard shall be conclusive and binding on the Contractor.

6.2. **Equipment, Material, Personnel**

6.2.1. The Contractor will not sub-let the works unless permitted in writing specifically by the GP.

6.2.2. The personnel will work from ____ AM to ____PM in ____ shifts (provide shift timings) every day including public holidays.

6.2.3. If the personnel as per the requirement are not deployed, then the Contractor will be liable for fine as decided by the GP. Contractor shall make suitable arrangements for the deployed staff towards residence / lodging and boarding.

- 6.2.4. The Contractor or his personnel shall not any time do, cause or permit any nuisance at the sites / do anything which shall cause unnecessary disturbances of inconvenience to the villagers.
- 6.2.5. The Contractor will be responsible for all acts done by the personnel deployed by him and for maintenance of proper discipline by his personnel. Any act of indiscipline / misconduct / theft / pilferage on the part of any personnel deployed by the Contractor, will result in fine or even termination of the contract.
- 6.2.6. The contractor will be responsible for death, injuries or damage to persons resulting from any act or neglect of the Employer, his agents, servants or other Contractors, done or committed during the validity of the Contract. He shall insure the suitably deployed personnel for the work, and a copy thereof be given to the GP.
- 6.2.7. The Contractor shall, from time to time, procure and acquire all item which may be needed to fulfil its obligations under this contract. The equipment and replacement parts so procured and acquired shall be of suitable size and type and in accordance with the specifications for the works.
- 6.2.8. The Contractor shall coordinate with the vendors at Block / District level for recycling of dry waste (plastic, glass, metal, etc.) local farmers or traders for selling compost generated from wet waste; and the respective authority / plants for disposal of medical waste, if and when applicable.
- 6.2.9. The Contractor should coordinate with vendors and / or respective authority for disposal of non-recyclable waste.

Collection of waste

- 6.2.10. The waste shall be collected from households / instates / public places i.e. source in two separate compartments for carrying biodegradable and non-biodegradable waste separately.
- 6.2.11. Hazardous waste shall be collected separately from the above and the Contractor will be responsible for coordinating with vendors and any other authorities for its proper disposal.
- 6.2.12. The hotel waste shall be collected in the night shift (Before closing).
- 6.2.13. Working time for door-to-door collection of waste from households / institutes / public places shall be between AM to AM (365 days in a year).
- 6.2.14. The Contractor shall deploy adequate number of people (apart from people deployed for door-to-door collection) for sweeping of roads and subsequent collection of waste. The Contractor shall ensure the availability of appropriate vehicles [in required number] at the designated places [365 days in a year] to collect the swept material / slit.

Segregation of waste:

- 6.2.15. The Contractor shall ensure that the segregation shed it kept clean at all times and is free from bad odour.

6.2.16. The solid waste collected shall be unloaded into compactor vehicles – non – biodegradable and biodegradable waste to be unloaded separately – and which in turn shall be transferred to respective treatment units.

6.2.17. The swept material shall be collected by the Contractor shall be collected by the Contractor through allotted vehicles and transported to respective treatment units.

Treatment Unit:

6.2.18. The Contractor shall ensure that the treatment unit is kept clean at all times.

General Maintenance :

6.2.19. Equipment covered under this contract shall be totally attended to by the Contractor including any trouble shooting to ensure smooth and trouble free operation.

6.2.20. The Contractor shall be responsible for keeping updated records of maintenance carried out by him / her.

6.2.21. The Contractor should maintain spares (whole and / or components) for all the vital equipment.

6.2.22. All the required consumables (chemicals, cleaning agents, oils etc.) to ensure smooth and trouble free operation shall be provided by the Contractor.

6.2.23. The Contractor shall do necessary minor repairs in the system and its components (if required). The Contractor shall bear all expenses for this purpose.

6.3 Required licenses, sanctions and permission, safety equipment

6.3.1. The contractor will obtain at his own cost, any license or permission of any sort whatsoever (viz., labour license, Service Tax and Income Tax registrations, etc.) that may be required under various Acts from the Central / State Government Authorities for carrying out the said activity in the premises of the GP and such Registrations and License for engagement of contract workers for such purpose within one month from the date of issue of work order. The Contractor shall ensure that all the vehicles used under the contract have proper licenses from respective RTO.

6.3.2. In case of emergency, repairs whenever required, prior permission from the GP shall be obtained.

6.3.3. The Contractor should make proper safety arrangements like safety masks, gloves, sanitizers, etc. for the deployed personnel during collection, segregation, transport and treatment of solid waste.

6.3.4. The contractor shall carry out monthly health check-ups of the deployed personnel.

6.3.5. As a precautionary measure, the Contractor shall ensure that a fire extinguisher in working state is made available at the premises of the segregation shed and the treatment unit.

6.4. Compliance of labour laws, minimum wage act, no child labour

6.4.1. The contractor will comply with the provisions of all Labour Laws, which are applicable to the Contractor or his authorised personnel and shall be solely responsible for liabilities arising out of it.

6.4.2. The Contractor will take necessary insurance coverage for his employees.

6.4.3. The Contractor will make the payment to personnel deployed by him as per minimum wages notified by the Office of the Regional Labour Commissioner. The Contractor will not deploy any person who is prohibited by law from being employed.

6.5. Environmental standards

6.5.1. All required Permits and Clearance shall be obtained as per Applicable Law which includes but not limited to The Environment Protection Act 1986, The Air (Prevention and Control) Pollution 1981 and Water (Prevention and Control) Pollution 1974 as amended from time to time.

6.5.2. Apart from the above, the Contractor shall abide by guidelines as per (but not limited to) SWM Rules, 2016; Plastic Waste Management Rules 2016; and E-Waste Management Rules 2016 and amended from time to time.

6.6. Early termination of contract

By the GP

6.6.1. The GP may terminate this contract, in not less than thirty (30) days of written notice to the contractor, in case of any of the events specified in the paragraphs (a) through (f) below (except for paragraph (e) where the notice period is sixty days) of this Clause.

- a. If the Contractor fails to remedy a failure in the performance of their obligations within thirty (30) days of receipt of such notice of suspension or within such further period as the GP may have subsequently approved in writing.

- b. If the Contractor fails to comply with any final decision given by the appropriate higher PRI official (the official mentioned for dispute settlement) – pursuant to clause 6.12;
- c. If the Contractor submits to the GP a statement which has a material effect on the rights, obligations or Interest of the GP and which the Contractor knows to be false;
- d. If as the result of Force Majeure, the Contractor is unable to perform a material portion of the services for a period of not less than sixty (60) days.
- e. If the GP, in its sole discretion and for any reason whatsoever, decides to terminate this contract.
- f. The GP shall not pay any compensation for early termination.
- g. The Contractor will permit the GP to hold or deduct the amount from the bill for non-performance or part performance or failure to discharge obligations under this contract.

By the Contractor

6.6.4. The Contractor may terminate this contract, in not less than thirty (30) days of written notice to the GP, in case of occurrence of any of the events specified in paragraphs (a) through (d) specified below-

- a. If the GP fails to pay any money due to the Contractor pursuant to this contract and not subject to dispute within forty five (45) days after receiving written notice from the Contractor that such payment is overdue.
- b. If the GP is in material breach of its obligations pursuant to this contract and has not remedied the same within forty five (45) days (or such longer period as the Contractor may have subsequently approved in writing) following the receipt by the GP of the Contractor's notice specifying such breach.
- c. If, as the result of Force Majeure, the Contractor is unable to perform a material portion of the services or a service for a period of not less than sixty (60) days; or
- d. If the GP fails to comply with any final decision given by the appropriate higher PRI official (the official mentioned for dispute settlement) pursuant to clause 6.12.;

6.7. Force Majeure

6.7.1. A Party affected by an event of Force Majeure shall continue to perform its obligations as far as is reasonably practical, and shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

6.7.2. During the period within which the Contractor shall not be able to perform its obligations as a result of an event of Force Majeure, the matter shall be settled mutually between the parties.

6.8. Indemnity

6.8.1. Any damage caused to any equipment / or items due to negligence of the Contractor's work force shall be entirely on the Contractor, the amount so involved on this account shall be deducted from the payment due to the Contractor.

6.9. Security Deposit

6.9.1. The contractor will deposit an amount equal to 10% of the contract value or shall submit bank guarantee letter / certificate towards Security Deposit for the due performance of the contract, which shall be refundable after expiry / termination of the contract. The deposit shall not bear any interest.

6.1. Obligations of the Employer

Assistance and Exemptions

6.10.1. GP shall use its best efforts to ensure that the Contractor is provided with all requisite facilities pursuant to applicable law as shall be necessary to enable them to perform the services.

Access to Land

6.10.3. The GP warrants that the Contractor and its staff shall have, free of charge, unimpeded access to all land in respect of which access is required for the performance of the services. The GP will be responsible for any damage to such land or any property thereon resulting from such and will not collect indemnity from the Contractor and each of the personnel in respect of liability for any damage, unless such damage is caused by the default or negligence of the Contractor or its personnel.

Changes in the Applicable Law:

6.10.4. If, after the date of this contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost or reimbursable expenses incurred by the Contractor in performing the services, then the remuneration and reimbursement expenses otherwise payable to the Contractor under this contract shall be increased or decreased accordingly by the agreement between the parties hereto.

6.10.5. In consideration of the services performed by the Contractor under this contract, the GP shall make payments to the Contractor as is provided by in the payment terms of this contract.

Environmental Safety

6.10.6. For the purpose leachate inspection, the GP should coordinate with District Engineer to ensure that the leachate is treated prior to its disposal.

6.11. Rewards and Penalties

6.11.1. The penalty amounts will be levied to the Contractor if the work is not done satisfactorily on any particular day as per standards or based on any other parameter related to the work under this contract (decided mutually between the Contractor and GP).

6.12. Dispute Resolution:

Amicable Settlement :

6.12.1 The Parties shall use their best effects to amicably settle all disputes arising out or in connection with this contract or the interpretation thereof.

Dispute Settlement:

6.12.2. Any dispute between the Parties as to matters arising pursuant to this contract which cannot be settled amicably within thirty (30) days after receipt by one party of the other party's request for such amicable settlement may be submitted by either party for settlement to Block Development Official / Dy. CEO WATSAN / CEO, Zilla Parishad / appropriate higher PRI official / Panchayat Samiti Official having responsibility of rural sanitation (Fill the appropriate official) in such a case the decision of (the official mentioned for dispute settlement) will be final and binding on both the parties.

7. Duration:

The contract shall be initially for a period of year(s) and shall be extendable up to ____ more years on observation of satisfactory performance on mutually agreeable financial terms.

8. Specifications:

- 8.1. The various materials, consumables, equipment, spares / parts etc. that will be required for uninterrupted and effective solid waste management shall be of standard specifications & wherever available should bear the B.I.S. certification. The Contractor shall submit relevant certificates for quality assurance for all the materials, consumables, equipment, etc. to the GP.
- 8.2. Further, make of any equipment / material not specifically mentioned in the above but required for uninterrupted & smooth O&M of the system should be of reputed make & whenever available should bear the B.I.S. certification. The Contractor shall submit relevant certificates for quality assurance for all the materials, consumables, equipment, etc. to the GP.

Contractor shall preferably provide uniforms to the deployed personnel, as decided by the GP, with clear identity cards.

- 8.3. The contractor shall follow standard procedure for stacking of waste in the scientific landfills, composting, treatment of hazardous waste, disposal of bio-medical waste etc. as per CPHEEO manual for Solid Waste Management, CPCB guidelines and SBM(G) guidelines.

9. Inspection procedure

- 9.1. Inspections of the Contractors work on collection, segregation, transport and treatment of solid waste can be done independently by the third party. The Contractors work is also liable for social audit by the community / VWSC. In case of leachate inspection, the Contractor shall comply with any decision taken by the Engineer and conveyed by the GP, pursuant to clause 6.10.6.
- 9.2. The Contractor / his representative shall provide necessary information / date to the community and will abide by the decisions take during Gram Sabha.
- 9.3. A weekly site meeting shall be held between the GP secretary, Sarpanch and the Contractor to verify that the works are progressing normally and are executed in accordance with the Contractor. The Contractor shall flag concerns regarding availability of electricity, condition of segregation shed, electro-mechanical equipment (if any) and treatment unit, need for repairs / replacements, issue about consumer awareness, redressal of complaints, etc. during the meeting and will abide to the decisions taken during the meeting by the GP representatives.
- 9.4. The GP members will have full power and authority to inspect the work at any time.

10. Confidentiality and ownership of the work and data

- 10.1. Confidential information shall at all times remain the sole and exclusive property of the GP. The Contractor shall not share / disclose it to a third party. Upon termination of this Contract, confidential information shall be returned to the GP.
- 10.2. The Contractor shall prepare an inventory of the fittings and fixtures that are installed in the public conveniences. The possession of the entire structure as constructed along with fittings and fixtures provided in the public convenience will be handed over to the GP, on the conclusion of the agreement without causing any damage.
- 10.3. The Contractor shall not communicate or use in advertising, publicity, sales realises or in any other medium, photographers, or other reproduction of the Work under this contract or description of the site dimensions, quantity, quality or other infuriation, concerning the work unless prior written permission has been obtained from the GP.

- 10.4. Equipment and materials made available to the Contractor by the GP, or purchased by the Contractor with funds provided by the GP, shall be the property of the GP, and shall be marked accordingly. Upon termination or expiration of this contract, the Contractor shall make available to the GP an inventory of such equipment and materials and shall hand over / give complete possession of such equipment and materials to the GP. The Contractor, unless otherwise instructed by the GP in writing, shall insure them at the expense of the GP in an amount equal to their full replacement value.
- 10.5. The Contractor should make available equipment and materials required for preliminary investigation and prepare estimates and detailed project reports at his / her own cost.

11. Prevention of brokerage and corruption

- 11.1. Neither the Contractor, nor any of its deployed personnel will engage in any brokerage fees, commissions or similar fees or expenses in connection with the transactions referred to in this contract for which GP is liable.
- 11.2. The GP shall be entitled to cancel the contract, if the Contractor or any persons employed by him or acting on his behalf have offered or given any person any gift or consideration of any kind of showing favour or disfavour to any person in relation to the Contract.

12. Payment terms

- 12.1. The major repairs / replacements shall be borne by the GP, for which proper movement and processing of documents will be the responsibility of the Contractor.
- 12.2. Recurring expenses (such as water, electricity, refuelling of vehicles etc.) shall be borne by the Contractor.
- 12.3. Monthly assessment of the service(s) provided by the Contractor, against the deliverables mentioned in section 5, will be done by the GP and upon satisfactory performance, 90% of the total contract amount shall be paid in equal monthly installations throughout the contract period.
- 12.4. Remaining 10% and the security deposit will be returned after six months from the date of completion of contract / termination of contract.
- 12.5. Payment to the Contractor shall be made within ten (10) days of receipt of invoice of the services.

**CONTRACT FOR O&M OF SOLID WASTE TREATMENT PLANT(S)
IN-----GP**

1. Contract parties and date of contract

This Contract is Made And Executed On This.....Day
Of.....20....., At
.....BetweenGram Pachayat
name.....& Block Name(Contactor
/Firm).....(District).....

2. Introduction

The contract aims to improve the O&M of the treatment plant or the material recovery facility as well as the biodegradable waste treatment unit as per the scope of work provided below in.....Gp. The service provider / Contractor shall be responsible for providing the required human resources (skilled and unskilled). Consumables, power charges, spare and tools, etc. for the stipulated period time as per the scope of work. Information about the GP (demography, structure of the GP, nature of waste generated, details of treatment units, etc.) Will be added here.

3. Definition

Unless the context otherwise requires, the following terms whenever used in this contract have the following meanings:

- 3.1 “Contractor” means the successful bidder or the service provider selected for performing the tasks mentioned in the contract
- 3.2. “GP-Gram Panchayat.” means Gram Panchayat of village/s-----of block in the district.....
- 3.3. “Applicable Law” means the laws and any other instruments having the force of law in the respective state related to panchayats’ or in India (as they may be issued and in force from time to time).
- 3.4. “Contract” means the contract signed by the Parties.
- 3.5. “Effective Date” means the date on which this contract comes into force.

- 3.6. “Government “ means the Government of India/respective State Government.
- 3.7.”Local Currency “means Indian rupees.
- 3.8 “Personnel” means persons hired by the contractor as employees and assigned to the performance of the services of any part thereof.
- 3.9. “Party” means the GP or the contractor as the case may be & parties mean both of them.
- 3.10. ”Service” means the works to be performed by the contractor pursuant to this contract for purposes of the operation and maintenance of system.
- 3.11.” Third Party” means any person or entity other than the Government, the GP and the Contractor.
- 3.12. ”Solid waste” includes commercial, residential and other waste generated within the limits of the GP. it will include biodegradable waste, non-biodegradable waste(including plastic, metal, menstrual waste, etc.) and hazardous waste(including medical waste, e-waste, etc.)

4. Scope of work

The scope of work covers segregation and end treatment of solid waste in -----households,----institutions and -----public places within number of villages and-----habitations in GP as per the scope defined below.

The contractor shall be responsible for segregation, treatment and scientific disposal of solid waste. The contractor shall provide personnel of required qualification and experience, vehicles, equipment , safety gears, etc. for smooth functioning of the system. if required, the contractor shall coordinate with special service providers for treatment and disposal of hazardous solid wastes. The indicative task list for the contract is provided below-

4.1 Segregation of waste

- Checking 100% segregation of bio-degradable and non-biodegradable waste.
- Segregation of collected non- biodegradable waste as plastic, building material, glass , rubber, cloth, leather, paper, wooden cardboard etc.

- Baling of segregated non- biodegradable waste during secondary segregation, if applicable.
- Transportation of segregated waste, with proper covering, for treatment according to their nature – bio- degradable waste to respective treatment site, plastic waste to material recovery facility, etc.
- Maintenance of the segregation shed-cleaning and periodic painting (if required), maintaining the electro mechanical devices (conveyer, bailing machine, light fitting, etc.)

4.2 End Treatment and Disposal

4.2.1 Biodegradable waste

- Application of standard operating procedure as per requirements of the technology or conditions mentioned by the service provider.
- Operation of structure /equipment/ devices for treatment of biodegradable wastes as per approved schedule.
- Maintenance of structure /equipment/devices as per approved schedule replenishing of media and culture for composting, cleaning, periodic painting (if required). Maintaining the electro mechanical devices maintaining of sufficient ventilation and lighting in the premises. etc.
- Conducting necessary minor repairs of civil structure /equipment / devices.
- Ensuring use of safety equipment by employees during handling of wastes.
- Coordination with technology experts, if required coordination for marketing and sale of by-products.

4.2.2 Non- Biodegradable waste

- Transportation of the segregated non-biodegradable waste to the respective vendors, treatment units, material recovery facilities, as applicable.
- Stracking of non-recyclable wastes and its transport to the scientific landfill area, incinerator, if applicable.

4.3 Grievance redressal

- Maintaining a complaint register for recording date wise details of the complaint.

- Identification of cause of the complaint and its redressal.

4.4 Record maintenance

Maintaining following records as per norms-

- Quantity of wet waste received from segregation shed and quantity of treated waste and monitoring seasonal variation in the quantity.
- Quantity of compost of sale and stock at hand.
- Documentation of billing, payment recovery, delivery of treated waste.

5. Deliverables

- Segregation of waste and transporting the segregated waste to the respective treatment units/scientific landfills.
- Scientific disposal of solid waste-treatment of biodegradable waste, transportation of non-biodegradable waste to the respective vendors, treatment units, material recovery facilities, scientific landfill area / incinerator.
- monthly report including-
 1. Vendor details for each type of waste, quantity of waste transported to the respective facility, schedule for transport of waste to the vendor, etc.
 2. Details of minor repairs and requirement of major repairs/replacements.
 3. Report of mishap if any.

(Due considerations shall be given in the deliverables in case of natural calamities like drought, flood, earthquake etc.)

6. Terms and conditions

6.1. The contractor expressly agrees that the decision of the GP regarding the contract terms shall be conclusive and binding on the contractor.

6.2. Equipment, Material, Personnel

6.2.1. The contractor will not sub-let the works unless permitted in writing specifically by the GP.

6.2.2. The contractor shall preferably provide uniforms to all the deployed personnel with clear identity cards.

6.2.3. The personnel will work from—AM to-PM in--- shifts (provide shift timings) every day including public holidays.

6.2.4. If the personnel as per the requirement are not deployed, then the contractor will be liable for fine as decided by the GP. Contractor shall make suitable arrangements for the deployed staff towards residence/ lodging and boarding.

6.2.5. The Contractor or his personnel shall not any time do, cause or permit any nuisance at the sites I do anything which shall cause unnecessary disturbances or inconvenience to the villagers.

6.2.6. The Contractor will be responsible for all acts done by the personnel deployed by him and for maintenance of proper discipline by his personnel. Any act of indiscipline I misconduct I theft I pilferage on the part of any personnel deployed by the Contractor, will result in fine or even termination of the contract.

6.2.7. The Corrector will be responsible for death, injuries or damage to persons resulting from any act or neglect of the Employer, his agents, servants or other Contractors. Done or committed during the validity of the Contract. He shall insure suitable deployed personnel for the work and a copy thereof be given to the GP.

6.2 .8. The Contractor shall, from time to time. Procure and acquire all items which may be needed to fulfil its obligations under this contract. The equipment and replacement parts so procured and acquired shall be of suitable size and type and in accordance with the specifications for the works.

6.2.9. The Contractor shall coordinate with the vendors at Block / District level for recycling of dry waste (plastic, glass, meta, etc.); local famers or traders for selling compost generated from wet waste; and the respective authority / plants for disposal of medical waste. if and when applicable.

6.2 .10. The Contractor should coordinate with vendors and / or respective authority for disposal of non-recyclable waste.

6.2 .11. The Contractor shall ensure that the segregation shed / treatment unit and premises is kept clean at all times.

6.2.12. Equipment covered under this contract shall be totally attended to by the Contractor including any trouble shooting to ensure smooth and trouble free operation.

6.2.13. The Contractor shall be responsible for keeping updated records of maintenance carried out by him / her.

6.2 .14. The Contractor should maintain spares (whole and/ or components) for all the vital equipment.

6.2.15. All the required consumables (chemicals, cleaning agents, oils etc.) for ensuring smooth and trouble free operation shall be provided by the Contractor.

6.2.16. The Contractor shall do necessary minor repairs⁴ in the system and its components (if required). The Contractor shall bear all expenses for this purpose.

6.3. Required licenses, sanctions and permissions, safety equipment

6.3.1. The Contractor will obtain at his own cost, any license or permission of any sort whatsoever (viz., labour license, Service Tax and Income Tax registrations, etc.) that may be required under various Acts from the Central / State Government Authorities for carrying out the said activity in the premises of the GP and such Registrations and License for engagement of contract workers for such purpose within one month from the date of issue of work order.

- 6.3.2. In case of emergency, repairs whenever required, prior permission from the GP shall be obtained.
- 6.3.3. The Contractor will make proper safety arrangements like safety masks, gloves, sanitizers. Etc. for the deployed personnel during segregation and treatment of solid waste.
- 6.3.4. The contractor shall carry out monthly health check-ups of the deployed personnel.
- 6.3.5. As a precautionary measure, the Contractor shall ensure that a fire extinguisher in working state is made available at the premises of the segregation shed and the treatment unit.

6.4. Compliance of labour laws, minimum wage act, no child labour

- 6.4.1. The Contractor will comply with the provisions of all Labour Laws, which are applicable to "the Contractor" or his authorised personnel and shall be solely responsible for liabilities arising out of it.
- 6.4.2. The Contractor will take necessary insurance coverage for his employees
- 6.4.3. The Contractor will make payment to personnel deployed by him as per minimum wages notified by the Office of the Regional labour Commissioner. The Contractor will not deploy any person who is prohibited by law from being employed.

6.5. Environmental standards

- 6.5.1. All required Permits and Clearance shall be obtained as per Applicable Law which includes but not limited to The Environment Protection Act 1986, The Air (Prevention and Control) Pollution 1981 and Water (Prevention and Control) Pollution 1974 as amended from time to time.
- 6.5.2. Apart from the above. the Contractor shall abide by guidelines as per (but not limited to } SWM Rules, 2016; Plastic Waste Management Rules 2016; and E-Waste Management Rules 2016 as amended from time to time.

6.6. Early termination of contract By the GP

- 6.6.1. The GP may terminate this contract, in not less than thirty (30) days of written notice to the Contractor, in case of any of the events specified m

the paragraphs (a) through (f) below (except for paragraph (e) where The notice period is sixty days) of this Clause;

- a. If the Contractor fails to remedy a failure in the performance of their obligations within thirty (30) days of receipt of such notice of suspension or within such further period as the GP may have subsequently approved in writing;
- b. If the Contractor becomes insolvent or bankrupt or enters into any agreements with their creditors for relief of debt or takes advantage of any law for the benefit of debtors or goes into liquidation or receivership whether compulsory or voluntary.
- c. If the Contractor fails to comply with any final decision given by the appropriable higher PRI official (The official mentioned for dispute settlement) -- pursuant to clause 6.23;
- d. If the Contractor submits to the GP a statement which has a material effect on the rights. Obligations or interests of the GP and which the Contractor knows to be false.
- e. If as the result of Force Majeure, the Contractor is unable to perform a material portion of the services for a period of not less than sixty (60) days.
- f. If the GP, in its sole discretion and for any reason whatsoever, decides to terminate this contract.

6.6.2. The GP shall not pay any compensation for early termination.

6.6.3. The Contractor will permit the GP to hold or deduct the amount from the bill for non performance or part performance or failure to discharge obligations under this contract.

By the Contractor

6.6.4 The Contractor may terminate this contract, in not less than thirty (30) days of written notice to the GP, in case of occurrence of any of the events specified in paragraphs (a) through (d) specified below-

- a. If the GP fails to pay any money due to Contractor. The Contractor pursuant to this contract and not subject to dispute with forty five (45)

days after receiving written notice from the Contractor that such payment is overdue.

- b. If the GP is in material breach of its obligations pursuant to this contract and has not remedied the same within forty-five (45) days (or such longer period as the Contractor may have subsequently approved in writing) following the receipt by the GP of the Contractors notice specifying such breach.
- c. If, as the result of Force Majeure, the Contractor is unable perform a material portion of the services or a service for a period of not less than sixty (60) days, or
- d. If the GP fails to comply with any final decision given by the appropriate higher PRI official (the official mentioned for dispute settlement) pursuant to clause 6.12;

6.7. Force Majeure

6.7.1. A Party affected by an event of Force Majeure shall continue to perform its obligations as far as is reasonably practical. and shall take reasonable measures to minimize the consequences of any event of Force Majeure.

6.7.2 During the period within which the Contractor shall not be able to perform its obligations as a result of an event of Force Majeure, the matter shall be settled mutually between the parties.

6.8. Indemnity

6.8.1. Any damage caused to any equipment *I* or items due to negligence of the Contractors work force shall be entirely on the Contractor. the amount so involved on this account shall be deducted from the payment due to the contractor.

6.9. Security Deposit

6.9.1. The Contractor will deposit an amount equal to 10% of the contract value or shall submit bank guarantee letter *I* certificate towards Security Deposit for the due performance of the contract, which shall be refundable after expiry *I* termination of the contract. The deposit shall not bear any interest.

6.10. Obligations of the employer

Assistance and Exemptions

- 6.10.1. GP shall use its best efforts to ensure that the Contractor is provided with all requisite facilities pursuant to applicable law as shall be necessary to enable them to perform the services.
- 6.10.2. In case user charges collection is expected by the Contractor, GP shall issue authorization letter in favour of Contractor.

Access to Land

- 6.10.3. The GP warrants that the Contractor and its staff shall have, free of charge, unimpeded access to all land in respect of which access is required for the performance of the services. The GP will be responsible for any damage to such land or any property thereon resulting from such and will not collect indemnity from the Contractor and each of the personnel in respect of liability for any damage, unless such damage is caused by the default or negligence of the Contractor or its personnel

Changes in the Applicable Law

- 6.10.4. If, after the date of this contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost or reimbursable expenses incurred by the Contractor in performing the services, then the remuneration and reimbursement expenses otherwise payable to the Contractor under this contract shall be increased or decreased accordingly by agreement between the parties hereto.

Payment

- 6.10.5 In consideration of the services performed by the Contractor under this contract, the GP shall make payments to the Contractor as is provided by in the payment terms of this contract.

Environmental Safety

- 6.10.6. For the purpose of leachate inspection, the GP should coordinate with District Engineer to ensure that the leachate is treated prior to its disposal.

6.11. Rewards and penalties

6.11.1. The penalty amounts will be levied to the Contractor if the work is not done satisfactorily on any particular day as per standards or based on any other parameter related to the work under this contract (decided mutually between the Contractor and GP).

6.12. Dispute Resolution

Amicable Settlement

6.12.1. The Parties shall use their best effects to amicably settle all disputes arising out or in connection with this contract or the interpretation thereof.

Dispute Settlement

6.12.7. Any dispute between the Parties as to matters arising pursuant to this contract which cannot be settled amicably within thirty (30) days after receipt by one party of the other party's request for such amicable settlement may be submitted by either party for settlement to Block Development Officer / Dy. CEO/WATSAN/CEO, Zilla Parishad / appropriate higher PRI official/ Panchayat Samiti Official having responsibility of rural sanitation (Fill the appropriate official) In such a case the decision of the (the official mentioned for dispute settlement) will be final and binding on both the parties.

7. Duration

The contract shall be initially for a period of -year(s) and shall be extendable up to -more years on observation of satisfactory performance on mutually agreeable financial terms.

8. Specifications

8.1. The various materials, consumables, Equipment, Spare / Parts etc. that will be required for uninterrupted and effective solid waste management shall be of standard specifications & wherever available should bear the B.I.S certification The Contractor shall submit relevant certificates for quality assurance for all the materials, consumables, equipment, etc. to the GP

- 8.2 Further, make of any equipment *I* material not specifically mentioned in the above but required for uninterrupted & smooth O&M of the system should be of reputed make & wherever available should bear the B.I.S certification. The Contractor shall submit relevant certificates for quality assurance for *all* the materials, consumables. Equipment. etc. to the GP.
- 8.3. The Contractor shall follow standard procedure for stacking of waste in the sanitary landfills composting, treatment of hazardous waste, disposal of biomedical waste etc. as per CPHEEO manual for Solid Waste Management, CPCB guidelines and SBM{G} guidelines.

9. Inspection procedure

- 9.1. Inspections of the Contractors work on segregation and treatment of solid waste can be done independently by a third party. The Contractors work is also liable for social audit by the community/VWSC. In case of leach ate, inspection the Contractor shall comply with any decision taken by the Engineer and conveyed by the GP, pursuant to clause 6.10.6
- 9.2. The Contractor *I* hrs representative shall provide necessary information *I* data to the community and will abide by the decisions taken during Gram Sabha.
- 9.3. A weekly site meeting shall be held between the GP secretary, Sarpanch and the Contractor Lo verify that the works are progressing normally and are executed in accordance with the Contract. The Contractor shall flag concerns regarding availability of electricity, condition of segregation shed, electro- mechanical equipment (if any) and treatment unit, need for repairs *I* replacements, issue about consumer awareness, redressal of complaints, etc. during the meeting and will abide to the decisions taken during the meeting by the GP representatives.
- 9.4. The GP members will have full power and authority to inspect the work at any time

10. Confidentiality and ownership of the works and data

- 10.1. Confidential information shall at all times remain the sole and exclusive property of the GP. The Contractor shall not share *I* disclose it to a third

party. Upon termination of this Contract, confidential information shall be returned to the GP

- 10.2. The Contractor shall prepare an inventory of the fittings and fixtures that are installed in the public conveniences. The possession of the entire structure as constructed along with fittings and fixtures provided in the public convenience will be handed over to the GP, on the conclusion of the agreement without causing any damage.
- 10.3. The Contractor shall not communicate or use in advertising, publicity, sales releases or in any other medium, photographs, or other reproduction of the Work under this contract or description of the site dimensions. Quantity, quality or other information, concerning the work unless prior written permission has been obtained from the GP
- 10.4. Equipment and materials made available to the Contractor by the GP or purchased by the Contractor with funds provided by the GP. Shall be the property of the GP. and shall be marked accordingly. Upon termination or expiration of this contract, the Contractor shall make available to the GP an inventory of such equipment and materials and shall hand over / give complete possession of such equipment and materials to the GP. The Contractor, unless otherwise instructed by the GP in writing, shall insure them at the expense of the GP in an amount equal to their full replacement value.
- 10.5. The Contractor should make available equipment and materials required for preliminary investigation and prepare estimates and detailed project reports at his / her own cost.

11. Prevention of brokerage and corruption

- 11.1. Neither the Contractor, nor any of its deployed personnel will engage in any brokerage fees, commissions or similar fees or expenses in connection with the transactions referred to in this contract for which GP is liable.
- 11.2. The GP shall be entitled to cancel the contract, if the Contractor or any persons employed by him or acting on his behalf have offered or given

any person any gift or consideration of any kind for showing favour or disfavour to any person in relation to the Contract.

12. Payment terms

- 12.1. Major repairs" / replacements shall be borne by the GP. for which proper movement and processing of documents will be the responsibility of the Contractor.
- 12.2. Recurring expenses (such as water, electricity, refuelling of vehicles etc.) shall be borne by the Contractor.
- 12.3. Monthly assessment of the service(s) provided by the Contractor, against the deliverable mentioned in section 5, will be done by the GP and upon satisfactory performance; 90% of the total contract amount shall be paid in equal monthly installations throughout the contract period
- 12.4 Remaining 10% and the security deposit will be returned after six months from the date of completion of contract / termination of contract.
- 12.5. Payments to the Contractor shall be made within ten (10) days of receipt of invoice of the services.

CONTRACT FOR SUPPLY OF SKILLED AND UNSKILLED HUMAN RESOURCES FOR COLLECTIN, SEGREGATION AND TREATMENT OF SOLID WASTE IN _____ GP

1. Contract parties and date of contract

This contract is made and executed on this _____ day of _____ 20_____, at _____.

Between

(Gram Panchayat Name)_____ & (Block Name)_____ (Contractor / Firm)

(District)_____

2. Introduction:

The purpose of the contract is to appoint a service provider for supply of skilled and unskilled human resources for collection, segregation and treatment of solid waste in__GP as per detailed scope of work defined below. The service prov.der I Contractor shall be responsible for supply of human resources as per requirement for door to door collection of solid waste from houses holds, institutes, public places, etc , transporting the wastes to the respective facilities and segregation of waste and O&M of the treatment units.

Information about the GP (demographics, area. sanitation status and facilities) will be added here.

3. Definitions:

Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

3.1. "Contractor" means the successful bidder or the service provider selected for performing the tasks mentioned in the contract.

- 3.2. "GP", means Gram Panchayat of village/s of block _____in the district_____.
- 3.3. "Applicable Law" means the laws and any other instruments having the force of law in India (as they may be issued and in force from time to time).
- 3.4. "Contract" means the contract signed by the Parties.
- 3.5. "Effective Date" means the date on which this contract comes into force.
- 3.6. "Government" means the Government of India or respective State Government.
- 3.7. "Local Currency" means Indian rupees.
- 3.8. "Party" means the GP or the Contractor as the case may be & Parties means both of them.
- 3.9. "Personnel" means persons hired by the Contractor as employees and assigned to the performance of the services of any part thereof.
- 3.10. "Services" means the works to be performed by the Contractor pursuant to this contract for the purposes of the Operation and Maintenance of the system.
- 3.11. "Third Party" means any person or entity other than the Government, the GP and the Contractor.
- 3.12. "Solid waste" includes commercial, residential and other waste generated within the limits of the GP. It will include biodegradable waste, non-biodegradable waste (including plastic, metal, menstrual waste, etc.) and hazardous waste (including medical waste, e-waste, etc.).

4. Scope of work

The Contractor will provide_____ skilled personnel and unskilled personnel for collection, segregation and treatment of solid wastes of _____ households, _____institutions and____ public places and maintenance of treatment plant within _____ number of villages and habitations in GP as defined below.

(Following table shows indicative list of required personnel, their qualifications and job description. These details will change depending upon the number of segregation sheds and treatment plants in the GP. A table of indicative HR

requirement for different tasks in collection and segregation of solid waste are given below.)

HR Requirement				
Personnel	No. required / nature of engagement	Educational Qualifications	Experience	Job Description
Sweeper	----Nos. Full time	NA	Should be physically fit for sweeping of roads and road sides	<ul style="list-style-type: none"> • Sweeping of the roads and road sides and dumping of the waste collected to designated location(s) / into the cart for solid waste collection. • In case littering is observed in any specific area, informing authorities for undertaking awareness drive etc.
Driver (if the collection is done using a vehicle)	---Nos.	Literate (preferred) Possession of valid driving license	6 months in driving of goods carriers, basic repairs and maintenance of vehicle	<ul style="list-style-type: none"> • Driving the dedicated vehicle for collection of waste as per the schedule. • Informing authorities for any repair and maintenance, refuelling, RTO clearances of vehicle, as required.
Waste collector	--Nos. Full time	Literate (preferred)	6 months to 1 year in collection of waste door-to-door. Conversant with different categories of solid waste – dry, waste and hazardous, safety gear usage	<ul style="list-style-type: none"> • Ensuring that solid wastes are segregated at source and informing with the concerned people, if waste is not segregated. • Collecting sold wastes (Bio-degradable, non-biodegradable, hazardous wastes, etc.) in the respective compartments of the cart / vehicle from household, institutes, public places, vegetable markets, open dumping spots

				<p>etc, etc., as per the schedule.</p> <ul style="list-style-type: none"> • Collection of medical waste from hospitals, dispensaries, etc., as per the schedule. • Regular cleaning of containers from cart/vehicle before door to door collection and after unload in segregation shed. • Maintenance of cart, as per the schedule and requirement.
Labour for segregation shed and end treatment unit	--Nos. Full times	Literate (preferred)	6 months to 1 year in secondary segregation method. Conversant with identification of sub categories of dry, wet and hazardous waste, usage of safety gears. Acquainted with WASH Practices	<ul style="list-style-type: none"> • Checking proper segregation of biodegradable and non-biodegradable waste. • Segregation of non-biodegradable waste as plastic, building material, glass, rubber, cloth, leather, paper, wooden cardboard etc. • Segregation of non-recyclable material and its transport to scientific landfill / incinerator, as provided in CPHEEO manual. • Operating, loading and unloading of treated dry waste from the baling machine, if available • Maintaining conducive conditions for functioning of treatment unit e.g. moisture control, replenishing of

				<p>media, culture, etc. for composting unit</p> <ul style="list-style-type: none"> • Maintenance of the all the electro-mechanical devices, light fittings, etc. • Maintaining sanitary conditions in the premises.
Supervisor	--Nos. Full time / Part time	Preferably trade mechanic	ITI for	<p>4-5 year in record keeping, stock maintenance, basic accounting</p> <p>Conversant with the operation and maintenance of components of treatment plant, WASH practices</p> <ul style="list-style-type: none"> • Finalizing the route map for collection of waste. • Ensuring 100% and timely collection from households, institutes, public places, vegetable markets, roadside garbage bins, etc. • Monitoring the use of safety equipment by employees at the time of collection, segregation and waste handling during transportation. • Stock maintenance of the consumables and informing the authorities about the requirement in advance. • Ensuring the functionality of all the components in the unit and co-ordinating with the respective personnel (carpenter, plumber, collection vehicle, etc) • Ensuring the segregated wastes are safely transported to the allotted treatment plant.

				<ul style="list-style-type: none"> • Checking of the complaint register and taking corrective actions. • Coordinating with technology experts, as required. • Co-ordinating with vendor on supply and pick-up of the treated waste. • Supervising the operation and maintenance process as per the standard operating procedure to the labours. • Informing GP author ties to create awareness. if waste is not being segregated at source.
Electrician	On call as per requirement (within 24 hrs after requirement raised)	Diploma in electrical engineering I full time ITI course of electrician	2 years m electrical works. Major repairs of electro mechanical devices specially pumps, motors. etc	<ul style="list-style-type: none"> • Trouble shooting of any issues related to motors, pumps etc. • Routine inspection of electromechanical devices • Checking and rectifying all the electrical fittings in the premises.
Mechanic	On call as per requirement (within 24 hrs after requirement raised)	Diploma in mechanical engineering	2 years m mechanical works. major repairs of electromechanical devices specially pumps. motors. etc ..	<ul style="list-style-type: none"> • Trouble-shooting of any issues related to leakages, pumps, shredder etc .. if applicable
Plumber	On call as per requirement (within 24 hrs after, requirement raised)	Preferably ITI trade for plumber	1 year in plumbing services. especially sewage drains and sanitary fittings	<ul style="list-style-type: none"> • Correct measures against leakages in pipelines, Taps, lush, etc
Painter	On call as per requirement (within 24 hrs after requirement	Preferably ITI trade of painter	1 year in basic painting work sand water proofing	<ul style="list-style-type: none"> • Annual / biannual painting of the treatment plant, segregation platform, and any other

	raised)			equipment as planned by GP.
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5. Deliverables

- Supply of skilled and unskilled personnel, without a break; as per the terms of the contract, throughout the contract period.
(Due considerations shall be given in the deliverables in case of natural calamities like drought. flood, earthquake, COVID 2019 etc.)

6. Terms and Conditions

6.1 The Contractor expressly agrees that the decision of the GP in this regard shall be conclusive and binding on the Contractor.

6.2. Personnel

6.2.1. The Contractor will not sublet the works unless permitted writing specifically by the GP.

6.2.2. The contractor shall preferably provide all the deployed personnel with uniforms with clear identity cards.

6.2.3. The personnel will work from- AM to - PM in- shifts (provide shift timings) every day including public holidays.

6.2.4. If the personnel as per the requirement are not deployed, then the Contractor will be liable for fine as decided by the GP

6.2.5. The personnel shall be paid at the rate mentioned in annexure 2. The said rates may be changed by mutual consent of the parties.

6.2.6. The Contractor will be responsible for all acts done by the personnel deployed by him and for maintenance of proper discipline by his personnel. Any act of indiscipline / misconduct / theft / pilferage on the part of any personnel deployed by the Contractor, will result in default, fine or even termination of the contract.

6.2.7. If the GP finds that any worker supplied by the Contractor is not carrying out the work satisfactorily, or is otherwise physically unfit to carry out the work involved. the Contractor shall withdraw such worker(s) from duty and substitute some other worker(s) in his / her place. The

GPs complaint will be final and accepted by the Contractor or the worker as justified.

6.2.8. If the Contractor wishes to replace any of the personnel. the same shall be done after prior consultation / approval of the GP. Full particulars of the personnel to be deployed by the Contractor including names and addresses shall be furnished (with authentic proof) to the GP before they are actually deployed for the Job.

6.2 .9. The requirement of the manpower may increase or decrease during the contract period. In case of decrease in the requirement. the same will be informed to the Contractor and additional manpower shall be withdrawn at the given time. If the requirement is increased, the Contractor shall provide additional manpower for skilled, semi skilled and unskilled manpower on the same terms and conditions in reasonable time.

6.2.10. In the event of contract personnel being on leave / absent, the Contractor shall ensure suitable alternative arrangement to make up for such absence.

6.2.11. The Contractor shall ensure that the personnel deployed by him to carry out the work shall not claim any right whatsoever against the GP by virtue of service rendered under this contract and shall not hamper the work by resorting to demonstration, agitation etc.

6.2.12. Contractor shall make suitable arrangements for the deployed staff towards residence /lodging and boarding and timely medical care.

6.2.13. The personnel deployed shall be healthy and active. Nobody shall have any communicable diseases.

6.2.14.The Contractor or his personnel shall not any time do. Cause or permit any nuisance at the site / do anything which shall cause unnecessary disturbances or inconvenience to the villages.

6.2.15. The Contractor will be responsible for all acts done by the personnel deployed by him and for maintenance of proper discipline by hrs personnel. Any act of indiscipline/ misconduct / theft / pilferage on the part of any personnel deployed by the Contractor, will result in fine or even termination of the contract.

6.2.16 The Contractor will be responsible for death, injuries or damage to persons resulting from any act or neglect of the duty his agents, servants or other Contractors, done or committed during the validity of the Contract. He shall insure these people suitably for the work, and a copy thereof be given to the GP.

6.2.17. The staff employed will be provided with all the required safety equipment. It shall be ensured that full safety measures are taken by the staff on duty. Staff employed shall be experienced and trained to handle the respective job.

6.2.18. The Contractor shall maintain the attendance record of the staff employed by him, which can be checked by the GP any time. The Contractor will also submit copy of all the data sheets every month for evaluation.

6.2.19. The premises of segregation shades / any other area in the GP. used by the Contractor shall not be utilized for purpose other than that for which it is allowed under this agreement.

6.3. Required licenses, sanctions and permissions, safety equipment

6.3.1. The Contractor will obtain at his own cost, any license or permission of any sort whatsoever (viz., labour license - etc.) that may be required under various Acts from the Central / State Government Authorities for engagement of contract workers.

6.3.2. The Contractor should make proper safety arrangements like safety masks, gloves, sanitizers, etc. for the deployed personnel for handling of solid waste during collection. Segregation, transport and treatment.

6.3.3. The Contractor shall carry out monthly health check-ups of the deployed personnel.

6.4. Compliance of labour laws, minimum wage act, no child labour

6.4.1. The Contractor will comply with the provisions of all Labour Laws, which are applicable to "The Contractor" or his or his employees and shall be solely responsible for liabilities arising out of it.

6.4.2. The Contractor will take necessary insurance coverage for his employees.

6.4.3. The Contractor will make payment to personnel deployed by him as per minimum wages notified by the Office of the Regional Labour Commissioner. The Contractor will not employ any person who is prohibited by law from being employed

6.5. Early termination of contract

By the GP

65.1. The GP may terminate this contract, in not less than thirty (30) days of written notice to the Contractor, in case of any of the events specified below.

- a. If the Contractor fails to remedy a failure in the performance of their obligations within thirty (30) days of receipt of such notice of suspension or within such further period as the GP may have subsequently approved in writing;
- b. If the Contractor becomes insolvent or bankrupt or enters into any agreements with their creditors for relief of debt or takes advantage of any law for the benefit of debtors or goes into liquidation or receivership whether compulsory or voluntary.
- c. If the Contractor fails to comply with any final decision given by the appropriate higher PRI official (the official mentioned for dispute settlement) - pursuant to clause 6.12;
- d. If the Contractor submits to the GP a statement which has a material effect on the rights, obligations or Interests of the GP and which the Contractor knows to be false;
- e. If as the result of Force Majeure, the between the parties. Contractor is unable to perform a material portion of the services for a period of not less than sixty (60) days.
- f. If the GP, in its sole discretion and for any reason whatsoever, decides to terminate this contract.

6.5.2. The GP shall not pay any compensation for early termination.

By the Contractor

6.5.3. The Contractor may terminate this contract in not less than thirty (30) days of written notice to the GP, in case of occurrence of any of the events specified in paragraphs below-

- a. If the GP fails to pay any money due to the Contractor pursuant to this contract and not subject to dispute within forty five (45) days after receiving written notice from the Contractor that such payment is overdue.
- b. If, as the result of Force Majeure, the Contractor is unable perform a material portion of the services or a service for a period of not less than sixty (60) days. or
- c. If the GP fails to comply with any final decision given by the appropriate higher PRI official (the official mentioned for dispute settlement), - pursuant to clause 6.12;

6.6. Force Majeure

6.6.1. A Party affected by an event of Force Majeure shall continue to perform its obligations as far as is reasonably practical, and shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

6.6.2. During the period within which the Contractor shall not be able to perform its obligations as a result of an event of Force Majeure, the matter shall be settled mutually e. If as the result of Force Majeure, the between the parties.

6.7. Indemnity

6.7.1. Any damage caused to any equipment / or items due to negligence of the Contractor's work force shall be entirely on the Contractor, the amount so involved on this account shall be deducted from the payment due to the Contractor.

6.8. Security Deposit

6.8.1. The Contractor will deposit an amount equal to 10% of the contract value or shall submit bank guarantee (for full contract period) letter /

certificate towards Security Deposit for the due performance of the contract. Which shall be refundable after expiry / termination of the contract.

6.9. Obligations of the employer

Provision of material

6.9.1. The GP will provide all material/ consumables which are required for collect on and segregation of waste such as vehicles, cleaning material, disinfectants. etc.

6.9.2. The GP will ensure supply of sufficient amount of water for cleaning and use by the workers at the segregation shade(s).

Access to Land

6.9.3. The GP warrants that the personnel. deployed by the Contractor shall have, free of charge, unimpeded access to all land in respect of which access is required for the performance of the services.

Changes in the Applicable Law

6.9.4. If, after the date of this contract. There is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost or reimbursable expenses incurred by the Contractor in performing the services, then the remuneration and reimbursement expenses otherwise payable to the Contractor under this contract shall be increased or decreased accordingly by agreement between the parties hereto. GST applicability will be as per the prevailing rules.

Payment

6.9.5. In consideration of the services performed by the Contractor under this contract, the GP shall make payments to the Contractor as is provided by in the payment terms of this contract, without any consideration of GST applicability

6.10. Rewards and penalties

6.10.1. If the Contractor fails to supply necessary HR on a requisition made by the GP in time, (excluding natural calamity like drought, floods, earthquake, etc.) will be liable to pay a sum of Rs..... as liquidated damages per professionals. not supplied in accordance with the requisition by the GP.

6.11. Dispute Resolution

6.11.1. The Parties shall use their best effects to amicably settle all disputes arising out or in connection with this contract or the interpretation thereof.

Dispute Settlement

6.11.2. Any dispute between the Parties as to matters arising pursuant to this contract which cannot be settled amicably within thirty (30) days after receipt by one party of the other party's request for such amicable settlement may be submitted by either party for settlement to Block Development Officer / Dy. CEO WATSAN / CEO, Zilla Parishad / appropriate higher PRI official / Panchayat Samiti Official having responsibility of rural sanitation (fill the appropriate official) In such a case the decision of the (the official mentioned for dispute settlement) will be obligatory to the parties.

7. Duration

The contract shall be initially for a period of --year(s) and shall be extendable up to --more years on observation of satisfactory performance on mutually agreeable financial terms.

8. Confidentiality and ownership of the works and data

8.1. Confidential information shall at all times remain the sole and exclusive property of the GP. The Contractor shall not share / disclose it to a third party. Upon termination of this Contract, confidential information shall be returned to the GP.

8.2. The Contractor shall not communicate or use in advertising, publicity, sales releases or in any other medium, photographs, or other reproduction of the Work under this contract or description of the site dimensions, quantity, quality or other information, concerning the work unless prior written permission has been obtained from the GP.

9. Prevention of brokerage and corruption

9.1. Neither the Contractor, nor any of its employees will engage in any brokerage fees, commissions or similar fees or expenses in connection with the transactions referred to in this contract for which GP is liable.

9.2. The GP shall be entitled to cancel the contract, if the Contractor or any persons employed by him or acting on his behalf have offered or given any person any gift or consideration of any kind for showing favour or disfavour to any person in relation to the Contract.

10. Payment terms

10.1. GP will provide monthly attendance details of deployed manpower to prepare a bill by Contractor.

10.2. The Contractor shall submit his bill in respect of the personnel provided during a month immediately after the close of the month. After verification of the correctness of the bill, the GP will make payment to the Contractor.

10.3. The Contractor shall be responsible for timely payment to the supplied manpower and statutory authorities and compliance of all statutory provisions relating to Minimum Wages, Provident Fund and Employees State Insurance etc. in respect of the persons deployed.

10.4. The security deposit will be returned within 6 months from the date of Completion of contract / termination of contract.

10.5. Payments to the Contractor shall be made within ten (10) days of receipt of the bill.

Annexure - 5
Monthly Reporting format

Collection Efficiency						Treatment Efficiency			Result							
1	2	3					4	5	5	6	7					8
Total Amount of waste collected (in kgs)	Cumulative since start	% of households that segregate waste at household level (Tick mark where appropriate)					Amount of wet waste processed (in kgs)	Amount of Dry waste sent to the recyclers (in kg) (connected to the recycle chain)	Amount of hazardous waste processed (in kg)	Cumulative amount of plastics/ bottles etc. connected to recycle chain (kg)	Amount of residual waste that ended up in the landfill finally (please give in %)					Amount of revenue generated from compost/ sale of recyclables etc. (in Rs.)
		0	25	50	75	90 <					100 %	75 %	50 %	25 %	10 %	

1.Note: Our focus should be on driving GPs to reach anywhere between 25% to 10% in column No.7 above. We should focus on progressive reduction of waste going to the landfill. Less waste dumped in the landfill implies that our treatment efficiency is good. Only about 10% reaches the landfill means we have prevented 90% of the waste from floating around in the environment. They have been processed. This should be the ultimate goal. Then we can declare such GPs as ‘Zero Waste Gram Panchayats’. We can also create a healthy competition among states to win this award. How many Zero Waste GPs each state can create may be thrown as a challenge, and drive.

2. Note: This format will help you report (i) the total amount of waste collected by all the GPs (in a block) in a given year – column2; (ii) the total amount of plastics and bottles etc. that Districts caused reach the recyclers instead of ending up in the environment – column 6; (iii) number of Zero Waste GPs, and those fast approaching to catch up that place – column 7; (iv) revenue generated from waste (or *wealth out of waste*, as some people call it) – column 8.

References :

1. Technological Options for Solid and Liquid Waste Management in Rural Areas, Ministry of Drinking Water and Sanitation, SBM (G), GoI, New Delhi, April, 2015.
2. Solid and Liquid Waste Management in Rural Areas – A Technical Note, UNICEF and GoI, Ministry of Rural Development, Department of Drinking Water Supply, 2007.
3. Guidelines on Solid and Liquid Waste Management (SLWM) in Rural Areas, MDWS & ADB, July, 2014.
4. Waste: An approach paper for sustainable management of waste, Suchitwa Mission, Local Self-government Department, Government of Kerala (Dr K Vasuki, 2015).
5. Solid Waste Mangement : A Step-by-Step Guide for Gram Panchayats, NIRDPR, August, 2018.
6. Swachh Bharat Mission Municipal Solid Waste Management Manual, Part – II: The Manual, Ministry of Urban Development, 2016.