Training Module on Service Contract Agreements for Wastewater Management in Gram Panchayats

Actionable Learning Modules
for Gram Panchayat Functionaries

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Foreword

The Government of India through Jal Jeevan Mission (JJM) has come up with an ambitious plan of providing Functional House Tap Connection (FHTC or yard taps) to every rural household by 2024. That means in the coming 3 – 4 years nearly 16 crore additional rural households are expected to get their yard taps for accessing drinking water. A fall out of this would be, the wastewater that will be generated from all these households. Therefore, the Government of India strongly suggests to the Gram Panchayats (GPs) to set up wastewater disposal systems. Funds are made available through the XV Finance Commission Grants, besides the allocation from the JJM and Swachh Bharat Mission-G.

Setting up, Operation and Maintenance of wastewater systems require technical know-how. Therefore, the Ministry of Panchayati Raj (MoPR) advises the GPs to consider the option of contracting out wastewater management services to professional private sector agencies. Out sourcing service delivery or involving in service contracts with third party agencies is new to Gram Panchayats. The GPs need to be familiar with the official procedures to be able to call for expression of interest / invite bids; scrutinise proposals; select an agency that will deliver; monitor progress against agreed terms and conditions and so on. For this to happen, the Gram Panchayats have to step up their game, which indicates a training need. The GPs need to be trained in Service Level Bench Marks, Service Contract Agreements, Financial Management of the Contracts, etc. The effort is towards enhanced level of service delivery, while at the same time the capacity of the GPs to govern local development gets a leg-up.

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. 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 Additional Secretary and Joint Secretaries at the MoPR for their support in this important task.

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Hyderabad
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Abbreviations

ANM	:	Auxiliary nurse and midwife
ASHA	:	Accredited Social Health Activist
BDO	:	Block Development Officer
CPCB	:	Central Pollution Control Board
EoI	:	Expression of Interest
GD		Group Discussion
GoI	:	Government of India
GP	:	Gram Panchayat
HH	:	Household
IEC	:	Information, Education and Communication
ICDS	:	Integrated Child Development Services
IHHL	:	Individual Household Latrine
ITB	:	Instruction to the bidders
JJM		Jal Jeevan Mission
LoI	:	Letter of Interest
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

RDD	:	Rural Development Department
RFP	:	Request for Proposal
RFQ		Request for Qualification
RLBs		Rural Local Bodies
RWS	:	Rural Water Supply
SLWM	:	Solid and Liquid Waste Management
SLRM	:	Solid and Liquid Resource 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
WWM	:	Wastewater Management
WTP		Waste Treatment Plant

CONTENTS

PART – 1

AN OVERVIEW OF THIS MODULE

Welcome

Wastewater generation - like solid waste is - is an inevitable part of human life. The Jal Jeevan Mission aims at giving Functional House Tap Connection to all rural households. Out of say, 100 litres of fresh water supplied through tap connection to a household, it's most likely more than 70 litres will get back to the drainage lines as wastewater. In other words, out of nearly 20 crores household in rural India, hardly 4 crore households have FHTC, and remaining 16 cores households have to be provided with FHTC in the coming 3 – 4 years. It suggests the amount of wastewater that will have to be managed, when every households has a FHTC. This brings in the need for additional wastewater management structures, and scientific wastewater disposal arrangements.

Village cleanliness and environmental sanitation are among the scheduled duties of every Gram Panchayat (GP).There are villages with drainage lines – either open or closed. Yet, at the final point, arrangement for scientific disposal is missing. While facility creation for water supply is made, the common sense to plan for avoidingwastewater stagnation or technical sense to set up a leach-pit in order to enable percolation are absent. The second issue related to wastewater is black water that comes from latrine pits, which is far more risky if we do not have a scientific disposal method. This training module has been developed bearing in mind the need for training the Gram Panchayat functionaries, and other community level resource persons / volunteers on typologies or models available for managing wastewater especially at the centralised level, through service contract agreements with third party agencies.

The predominant focus of this training module is on managing wastewater through service contract agreements deploying agencies specialising in wastewater 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 wastewater management are very marginally touched upon – or

in a way, deliberately kept outside the scope of this module for 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, wastewater management and faecal sludge management are specialised tasks, which require training modules designed exclusively for that purpose. They are taken up separately. The focus here is restricted to service level benchmarks; service contract agreements; bidding and the procedures to fix third party agencies for setting up technical structures for scientific disposal of wastewater.

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 disposal wastewater at household and community levels. 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 wastewater management; and Day-2 focuses on service contracts.

The specific objectives are:

- To introduce to the local body leaders, what a wastewater 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 two-day training on wastewater 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 wastewater management system. However, without the knowledge of what a 'wastewater management system' entails, it

will be jumping the gun to get into signing service contracts with third party agencies.

Therefore, this module has been designed keeping in view, on Day -1 we introduce what a wastewater 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.

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. The progressive learning that takes place during the input sessions should enable them to relate the learning to their local conditions.

In line with this, on day – 2, it is planned to have a group work, 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 wastewater on their own - rather than contracting it out - they are empowered to decide so. Thus, this option is also open. The GPs have to select technologies

that are simple to operate and maintain, with minimal technicalities for easy O & M.

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. As of now, by wastewater management, many GPs take it to mean constructing drainage lines. The idea of scientific disposal or putting in place appropriate technologies for wastewater reuse / recycle does not come in their mind.Nor are they getting orientated on such things. The leaders of local self-governments who attend this training should go with ideas to put in place scientific wastewater management system, and with the tools required for engaging third party agencies for O & M of such facilities. Thus, this training module intends to be an actionable learning module.

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 – moving from known to unknown; and from general to specific. This makes the learning easy and assimilation systematic.

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
TRAINING SCHEDULE

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. wastewater disposal in GPs.	• Introduce the participants; Introduce the purpose of the training (and the training schedule) • State the importance of the training in the context of rural sanitation related responsibilities of GPs as per XI Schedule of the Constitution of India
	2	Understanding Wastewater in Rural Context	To put across the magnitude of the problem wastewater is, and to distinguish grey water from black water; and discuss the health hazards associated with improper disposal of wastewater.	• Types of wastewater – Grey water & Black water • Wastewater: Magnitude of the Problem • Problems with existing wastewater disposal arrangement, and the associated health hazards
	3	Technical Management of Grey Water	To discuss technology options available at household, and at community levels for management of grey water; and to emphasise the need to plan for grey water recycle and reuse	• Estimating the quantum of wastewater generated • Technology options for household level solutions • Technology options for community level / centralised solutions • Reuse and Recycle options - Case studies and Success Stories

	4	Technical Management of Black Water	To articulate the need for converting single pit toilets into double toilets and discourage construction of septic tanks To introduce technology options for black water treatment, and explain the need for cluster level Faecal Sludge Treatment Plants To show the steps in FSM Planning	• Converting Single pit into Double pit Latrines • Pit emptying of twin pit latrines • Septic tank emptying and safe transport • Technologies for treatment of faecal sludge, and FSM value chain • Steps in FSM Planning
	5	Financial Management	To explain various sources of funds available for setting up wastewater management units at GP level and black water management units at Cluster level; To estimate and analyse the likely expenses to be incurred in O & M of WWM Units, and the sources of income / funds to be able to meet the O & M expenses for operational sustainability	• Schemes /sources of funds for wastewater management units / FSM units • 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 • Viability gap and how to fill in the gap
TWO	6	Service Contract Management	To discuss the basics of service contract agreements, bidding, and procedures involved in selection of wastewater management service providers on contract basis; and how to prepare a bid, and appoint third party agencies into service contracts	• Basics of Contract Management (Third Party Engagement & Service Contracts) • List out Service Options for wastewater management • Provisions for Contract in State PR Acts • Guidance for Selection of Contracts • Procedure of Awarding Contract • Customization of Contract Documents
	7	Typologies of Service Contracts	To put across a range of model contract typologies for engaging professional external agencies for grey water / black water management at GP level	• Model Contract Typologies for grey water management • Model Contract Typologies for black water management

				• Skilled and Unskilled Manpower Requirements
	8	Professionalization of Services	To define the Service Level Bench Marks (SLBs) for providing grey water / black water management services; To describe the required manpower - Skilled and Unskilled - with appropriate training, experience and skill-sets in order to ensure scientific management of wastewater, and enhance local employment potentials in such services; 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;	• Professionalization of wastewater management services • Service Level Benchmarks (SLBs) for wastewater management including FSM • Monitoring Indicators and the rationale behind indicators Monitoring Service Delivery – Indicators • Skilled and Unskilled Manpower Requirements • Local employment potential of sanitation and waste management services • Institutional arrangement for periodical monitoring
	9	Group Work	To apply the knowledge gained during the training in order to customise a service contract	• 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 during the training on contract management of sanitation services	• 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'.

DAY - 1

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 wastewater 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 wastewater management in rural areas, and the need to set up scientific disposal of wastewater.

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 scientific disposal of wastewater.

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 funny.

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 proper disposal of wastewater, without allowing wastewater to run across streets or stagnate on the streets. The 15th Finance Commission has emphasized that 60% of the funds must be spent on water and sanitation related services. This is another reason why we should take it 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)

DAY - 1

Session – 2
Understanding Wastewater in Rural Context

Session Outcome

Upon completion of this session, the participants shall:

1. Recognise the magnitude of the problem wastewater is, in the context of rural areas, and to identify the health risk it causes to the humans.
2. Know two broad types of wastewater, and discuss the characteristics of greywater and black water
3. Summarise the problems associated with wastewater, and describe it in the context of the GP one comes from

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

- Types of wastewater – Greywater & Black water
- Wastewater: Magnitude of the Problem
- Health risks caused by use and stagnation of wastewater
- Problems with existing wastewater disposal arrangement

PROCESS

Note to the Trainer

Every person / every household generate wastewater daily. Therefore, it's easy for the trainer to initiate and lead the discussion pointing at water use / water wasted in every household. This session is best kept as a lecture-cum-discussion. The trainer can also take for example a village with 1000 population that get supplied 55 liter per capita water; how much of wastewater is likely to get out in total. Show that 70 – 75% of the water shall come out as wastewater i.e. nearly 40,000 litres of wastewater. This real-life example can help take the discussion to the next level. The points to stimulate during the discussion are: magnitude of the problem; the health consequences; environmental pollution, and so on.

Then distinguish grey water from black water; the sources they come from; and give basic characteristic differences. Then direct the discussion towards the existing practice of wastewater – grey water and black water in the GPs the participants come from. Here our focus should be to make them understand that constructing drainage lines does not solve the problem of grey water disposal. The final disposal needs to be scientific for which there are many technology options available.

Such technologies will be dealt with in the subsequent sessions. Similarly, the ways to deal with black water from single pit toilets, or septic tanks as well as the requirement for pit emptying in twin pit toilets will be dealt with in the subsequent sessions.

- ## TECHNICAL NOTE TO THE TRAINER

Wastewater

Water 'wasted' as a result of various human activities at home, in restaurants, and other industries is called liquid waste or waste water. In rural areas, waste water is

broadly classified as domestic waste water (black water and Grey water) and commercial waste water (sewage) emanating from hotels, slaughter houses, small scale industries, laundries etc.

Grey water: Wastewater from bathrooms or kitchens that has no faecal contamination is called Grey water. Examples of Grey water include wastewater from the bath, shower, laundry, and kitchen sink. It is estimated that 15,000 to 18,000 million litres of Grey water are generated each day in rural areas of India.

Grey water is generated due to household activities; its main characteristics strongly depend on factors such as cultural habits, living standard, household demography, and types of household chemicals used. Grey water is the least contaminated type of wastewater which needs very less degree of treatment.

Backwater: This is primarily water from toilets. It is a mixture of urine, faeces, flush water along with anal cleaning water, and/ or dry cleaning materials. This is also called sewage.

Magnitude of the problem

Rural area in India is supplied with an average 55 litres of water per capita per day. 65 to 70 per cent of the total water supplied to rural India is getting back to the drainage lines as grey water. On the basis of the quantity of water supplied, rural India, on average, generates about 31,000 million litres of grey water daily. This primarily includes wastewater from the kitchen, bathroom and laundry. The volume and nature of grey water varies with the lifestyle of the population.

One extremely important determinant of the volume and nature of wastewater is economic status and access to water sources. In less-affluent communities with poor access to water, quantities of wastewater typically range from 20-30 litres/person daily. The volume increases to approximately 100 to 150 litres/person in developing

areas. In fully urbanized villages, it is in the range of 100 to 150 litres/day. The census 2011 revealed that only 37 percent of rural households had drainage inside their premises. There are 2,55,576 GPs in the country. A profile of liquid waste generated in these Panchayats indicates that 19 percent of the large GPs contribute to nearly 50 percent of the wastewater. Such larger GPs require proper wastewater management systems in place, preferably with recycle and reuse arrangement.

Health Risk associated with water stagnation: Indiscriminate disposal of wastewater on the streets, and allowing it to stagnate causes several health risks, besides mosquito-breading. They include: diarrhoea, dysentery, cholera, typhoid, jaundice, polio, infectious hepatitis and amoebic dysentery. They are often called water-borne diseases.

Existing wastewater disposal systems: There are three major types of problems we confront in villages. (1) In many villages, there is no wastewater drainage facility as such; (2) Where there is drainage, you find most of them are open drainages, where people are habituated to sweep down all household waste into; (3) where there are closed drainages, you find the final disposal of wastewater / sewage water is haphazard. There is no scientific disposal taking place. There is no arrangement for sedimentation or filtration for recycle and reuse. They are let open into some pond or river course, or allowed to run openly in private fields leading to land pollution, and mosquito breeding. We shall see in the subsequent sessions, what are the ways in which the GP can manage such problems.

PowerPoint Slides

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

DAY - 1

Session – 3
Technical Management of Greywater

Session Outcome

Upon completion of this session, the participants shall:

1. Estimate the total amount of waste generated in a Gram Panchayat, and identify it by type.
2. Illustrate technology options for wastewater disposal at household level, and at community / centralised levels.
3. Recognise wastewater management is not merely about drainages, and explain the meaning of scientific disposal of wastewater
4. Discover the reuse and recycle options, and relate it to one's own context

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

- Estimating the quantum of wastewater generated
- Technology options for household level solutions
- Technology options for community level / centralised solutions
- Reuse and Recycle options - Case studies and Success Stories

PROCESS

Note to the Trainer

The trainer begins this session with the following question. *When we plan to set up a wastewater 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 wastewater generated in a given Panchayat. This can be discovered, when we know how much water is pumped for distribution to households and other shops and establishments. An assessment is about 70% will end up in drainage lines or in streets. We could demonstrate it in the previous session. We need to recapitulate it.

In order to manage wastewater – be it grey water or black water, we need to put in place a 'wastewater management system'. What do we mean by that? What does such a system entail?By wastewater management, often we understand construction of drainage lines. But, it is about connecting all the households to the drainage lines, and making sure that the final disposal arrangement is scientific. Any households that have not been covered in the course of the drainage line – possibly because of the scattered nature of settlements – then such isolated houses must have household level wastewater disposal arrangement.

Managing also involves asking questions such as who is going to manage. If it's Gram Panchayat, does the GP have the capacity to manage? If not, what are the alternatives? Where will the money come from for setting up the infrastructure facilities required? Where will the money come from for sustainable operation and maintenance? This also involves a series of GP level discussion;trained manpower in place; decision making on sources of funds to manage; community preparation and so on. Thus, wastewater managemententails end-to-end planning. Therefore, it's technical; it's financial; it's social; it's institutional and so on. A GP needs to get clarity from all these dimensions. That's what we mean when we say: putting in place a wastewater management system.

Technical management entails, how we are planning to address wastewater issue with the households that are settled in a row; and households that are settled in a scattered way. We shall discuss a range of technology options here as to what type of technology will be appropriate for household level disposal of grey water; and what will be suitable for community level / centralized level etc. The discussion will be at elementary level only. The purpose is a basic level of understanding is required on these things so that it will be easy to negotiate with the contractors / third party agencies when we venture into discussion with them on contracting out some of these services.

This will also help selection from among a bundle of services which ones can be contracted out; and which ones can be handled at local level. This discussion should gradually move towards showing the possibilities of wastewater recycle and reuse.

TECHNICAL NOTE TO THE TRAINER

The quantum of wastewater generation: For a GP to plan for setting up a wastewater management system, what data and information are required? The GP needs to know the quantity of wastewater generated – by type (grey water and black water). What is the existing arrangement for grey water disposal; and what is the arrangement for black water disposal? Are there any toilets connected to the drainage line, if there are drainage lines. This data is necessary to be able to hold a discussion with a third party agency, if we have plans of contracting out the wastewater management task to such agencies.

Basic Principles of Grey Water Management

Below are some of the principles to be considered during the planning of grey water management systems in a village. These must be considered in conjunction with the needs and preferences of the target population. The most appropriate and easy to use technology interventions with low operation and maintenance cost must be chosen at appropriate levels and conforming to these broad principles.

- **Reduce:** Judicious use of freshwater which will result in the generation of a minimum quality of Grey water.
- **Reuse:** Reuse of Grey water for purposes such as kitchen garden, vehicle washing, toilet flushing etc to the maximum possible extent.
- **Recharge:** Recharge of ground water with Grey water by adopting technologies such as soakage pit, leach pit etc
- Separation of Black Water (if any) and Grey water
- Treatment of Grey water at the nearest possible point from the of generation.

In smaller GPs / villages, more decentralised and household centric approaches like individual soak pits / each pits / magic pits/ kitchen garden are more feasible and preferred. For larger villages but with a population of less than 5000, community level soak pits may be planned based on the terrain, groundwater level and destiny of population.

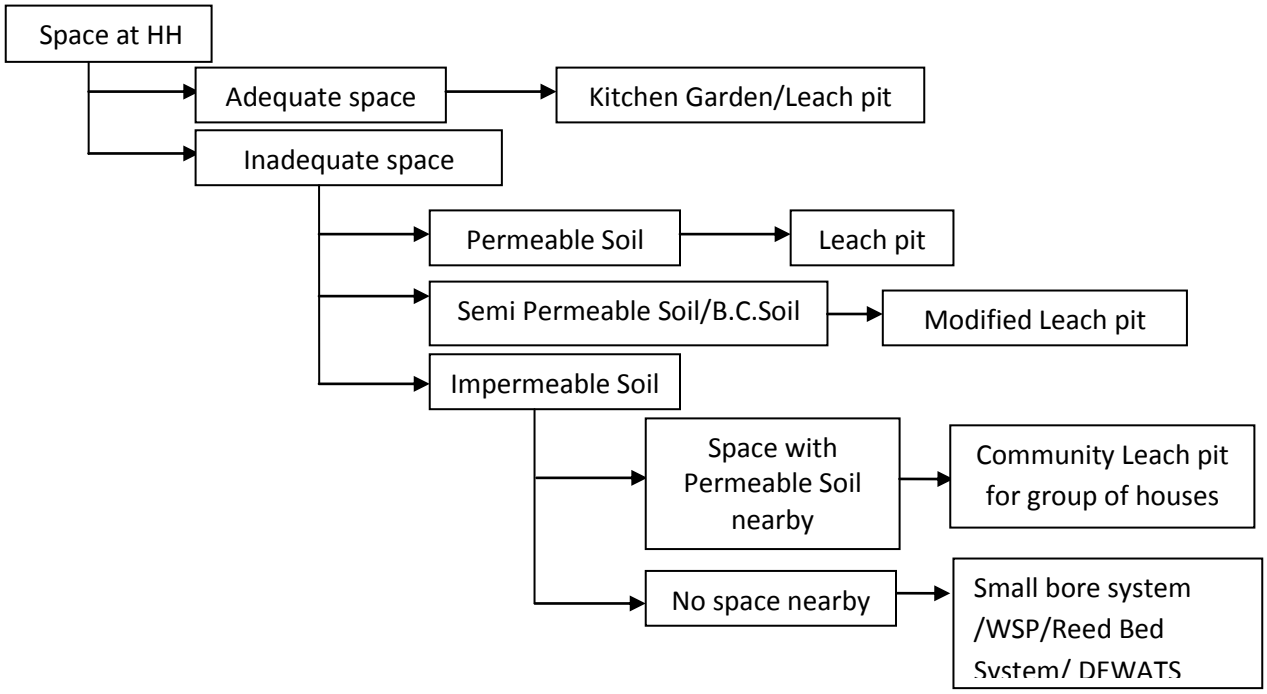
Villages with more than 5000 population should plan for a conveyance system like underground / small bore sewers / closed drainages and treatment systems like WSP / DEWATS / constructed wetlands and other treatment systems. However, States will have the flexibility to take up a conveyance and treatment systems for smaller villages as well depending on the agro-climatic factors, with additional funds supported from 15th Finance Commission and convergence from other State funds.

We must bear in mind that we need to putin place a wastewater management system – a system that will enable recycle and reuse of wastewater for non-potable purposes such as Panchayat level gardening, village greening, and for toilet flushing in local school etc.

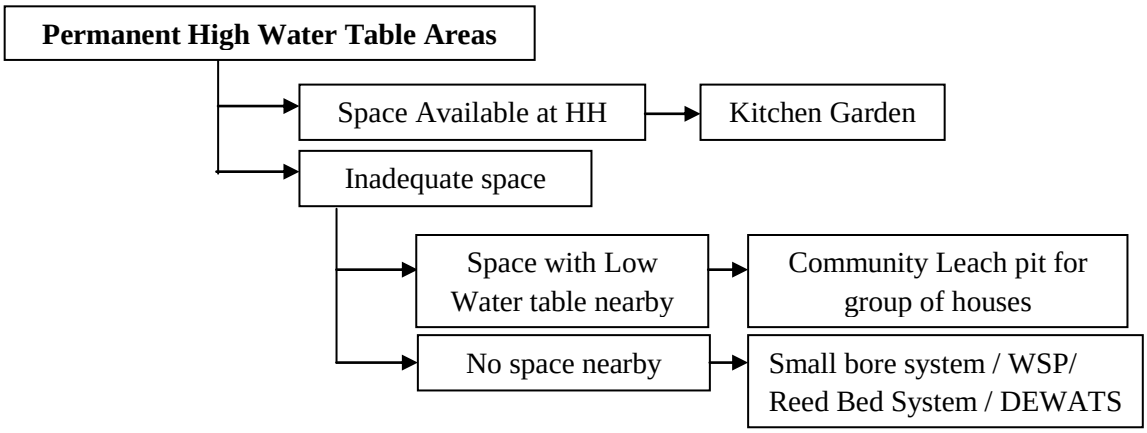
Technology Selection Criteria

Even within a village, there can be multiple options for individual households or a group of houses. While planning for a GP, the following guidance can help select the technology depending upon the geo-hydrological condition of the GP.

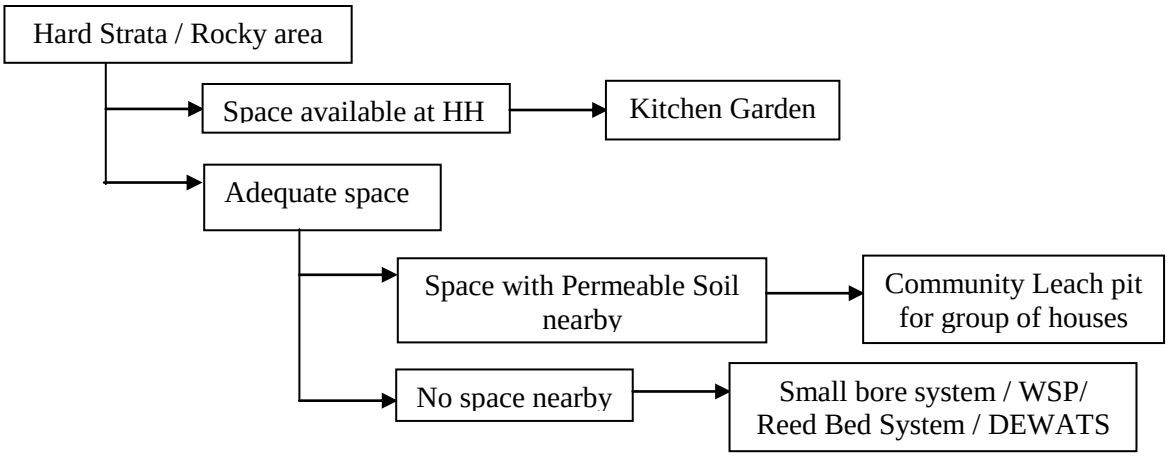
(A) For General Area



(B) For Areas with seasonal or permanent high-water table / water logged areas



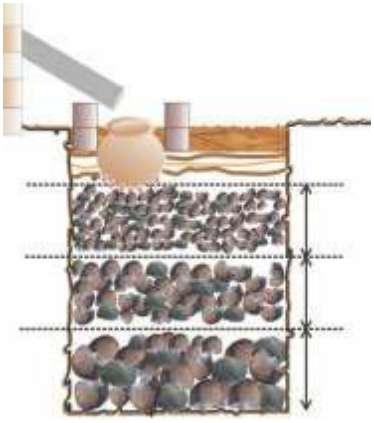
(C) For Areas with hard strata (rocky strata)

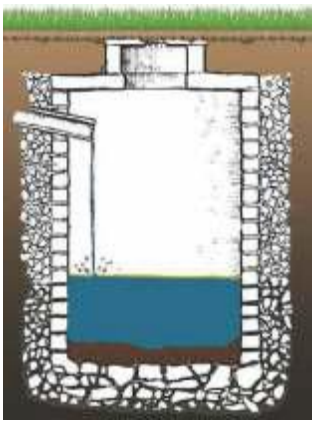


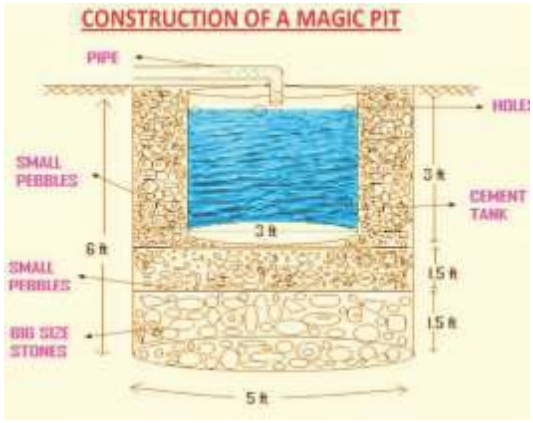
Technology Options

Household level intervention

- **Soak Pit:** Dug out pit filled with stones or preferably over burnt bricks. The large number of stones increase the surface area over which biological and chemical action takes place.
- **Leach Pit:** Leach Pit is a brick-lined pit constructed in honeycomb masonry having a volume of about 0.75 cubic meters.
- **Magic Pit:**A Magic pit is a covered, porous-walled chamber that allows water to slowly soak into the ground. Pre-settled effluent from a collection tank is discharged to the underground chamber.







Community Level Interventions

For community level interventions on waste water management, the conveyance of waste water from the source of generation to a point of treatment is needed. For that, usually conventional drains (open/closed) or small bore sewers can be used.

i) Community Leach pit

This is a brick-lined pit constructed at a convenient place for a group of houses. The number of houses to be connected should be calculated based on the Greywater discharged from each house and the space available for the community leach pit. Greywater from the houses (kitchen waste water, bathing water, washing water, etc.) should be carried to this pit.

ii) Waste Stabilization Ponds

Waste stabilization ponds (WSP) are shallow man- made basin into which wastewater flows and from which,after a retention time of a few days a well treated effluent is discharged. WSP systems comprise of a series of ponds – anaerobic, facultative and maturation ponds in series. The essential components of this system are:

The system has three basic units called ponds, placed in series and characterised by their function such as:

1. Anaerobit pond – one number
2. Facultative pond – one number
3. Aerobit pond or maturation pond – one or more in number depending upon the impurities in the Greywater.

iii) Constructed Wetland (CW)

A horizontal flow constructed wetland (horizontal flow CW) is a planted filter bed for treatment of wastewater (e.g. Greywater or black water). Horizontal subsurface flow constructed wetland is large gravel and sand filled channel that is planted with aquatic vegetation. As wastewater flows horizontally through the channel, the filter material filters out particles and microorganisms.

The waste water is treated by a combination of biological and physical processes. The effluent of a well-functioning constructed wetland can be used for irrigation and aquaculture of safely discharged to receiving water bodies. Horizontal flow CW is relatively inexpensive to build where land is affordable and can be maintained by the

local community as no high-tech spare parts, electrical energy or chemicals are required.

iv) Decentralised Wastewater Treatment System (DEWATS)

DEWATS is a proven nature based treatment technology suitable for wastewater treatment including greywater which works under gravity negating the requirement of any electro-mechanical components and hence provides the advantage of minimal maintenance. The DEWATS module for each project / situation can be customized based on different quantity and quality of incoming wastewater characteristics. The DEWATS is chemical-free and cleans the water through natural processes, preserving resources and demonstrating the value of reusing and recycling water especially in water scarce areas.

DEWATS follows four stages of treatment which could be designed based on the characteristics of inflow water and the level of treatment required.

v) Phytorid technology

Phytorid is scientifically developed systematic treatment methodology for waste water. Phytorid combines Physical, Biological and Chemical processes. It works on gravity, cost-effective technology with o electric power requirement, scalable technology, easy to maintain and adds to aesthetics.

A primary treatment facility would also be constructed along with basic for effective removal of solids and thus reduces the marginal BOD. The porous media also supports the root structure of emergent vegetation. The design of the Phytorid system assumes that the water level in the cells will remain below the top of the filter media. The vegetation to be utilised for the said Phytorid system is very important. Various species of aquatic plants have been utilised to attain maximum efficiency in the treatment of domestic wastes. These include species like Pharmitesaustralis, Phalarisarundinacea, Glyceria maxima, Typha spp., other common grasses etc. This technology is a natural system; as a result, the operation is mostly passive and requires little operator intervention.

Conveyance Systems

One of the cheapest and interim options for disposal of Greywater, Greywater + septic tank effluent is the covered surface drains. Further, open channels often exist in rural areas and hence can be upgraded to covered drains with little efforts.

The objective of covered surface/storm water drain is to remove waste water / rain water from the households / premises in a controlled and hygienic manner to minimize public

health and environmental risks. Open drain/channel have higher friction than a pipe. In relatively flat areas, pipe flow could be better, an alternative option would be laying the pipe into the open channel and cover it.

Small Bore Sewers

Small bore sewer systems are designed to receive only the liquid portion of household wastewater for off-site treatment and disposal. Grit, grease and floating materials are separated from the waste flow in interceptor tanks like septic tanks. Such interceptor tanks are installed after each household or group of households as per the site conditions. Depending upon the size of interceptor tanks and inflow of waste water, settled solids should be removed periodically from the interceptor tanks. Sewers are small bore pipe (minimum diameter of 100 mm) which is trenched into the ground at a depth enough to collected the settled wastewater from most connections by gravity. Unlike conventional sewers, small bore sewers are not necessarily laid on a uniform gradient with straight alignment between manholes or cleanouts. These conveyance system should end into treatment systems like Community leach pits, Waste Stabilisation Ponds, Constructed welands, DEWATS, Phytorid technology etc.

PowerPoint Slides

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

DAY – 1

Afternoon

Session – 4
Technical Management of Blackwater

Session Outcome

Upon completion of this session, the participants shall:

1. Recognise the problems in emptying single pit toilets, septic tank toilets, and the need for safe transport, treatment and disposal of black water
2. Articulate the need for converting single pit toilets into double toilets and discourage construction of septic tanks
3. Discover technology options for black water treatment, and explain the need for cluster level Faecal Sludge Treatment Plants
4. Explain the prudence behind Faecal Sludge Management (FSM) Value Chain
5. Identify the steps in FSM Planning

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

- Converting Single pit into Double pit Latrines
- Pit emptying of twin pit latrines
- Septic tank emptying and safe transport
- Technologies for treatment of faecal sludge, and FSM value chain

- Steps in FSM Planning
- What does scientific management of wastewater entail?

PROCESS

Note to the Trainer

This session is about the problem of faecal sludge from single pit toilets; from septic tanks; and the pit emptying required for twin leach pit toilets. It's not a good idea nor is it necessary to propose a Faecal Sludge Treatment Plant at every Gram Panchayat. It may not be viable. It will remain non-functional most part of the year. However, it may be necessary to plan for a cluster of GPs / or at Block level or a few in every district. It may also be necessary to have service contract agreements for emptying septic tanks through appropriate suction equipment, and safely transport to treatment plants. This session gives a fundamental level understanding on handling black water in a technically acceptable way.

This session may start with addressing issues with single pit toilets. Although the SBM-G advocated for constructing twin-pit toilets, in reality many households have gone for single pit toilets due to various justifications each one has. Now it's time to convert all those single pit toilets into twin leach toilets. Otherwise, the single pit toilets are essentially holding tanks which when got filled will encourage open defecation practice to resume.

Then move on to discuss about the need for pit emptying in the case of twin leach toilets. Here the emphasis is that the households must leave the faecal matter to decompose for a period of 18 – 24 months depending on the climatic conditions before they attempt pit emptying. Then the trainer can talk about the need for technical modifications to be made in the junction box; and how the flow must be redirected to the second pit etc.

Thirdly the trainer shall discuss about the need for safe transport of faecal sludge from septic tanks,and disposal at only in the designated FST Plants. This may require having a

contract with private transport service provider dealing in black water. The contact details of the nearest FST Plant, and the terms and conditions for users of FST service etc. If there are service contract agreements required with such contractors, the GP may have to enter into contracts. In this session, the discussion will revolve around technical solutions available to managing black water, and essentially the need to prevent faecal sludge from being let open in some open places away from eye-sight.

TECHNICAL NOTE TO THE TRAINER

Background

Proper management of accumulated faecal sludge in rural areas is a challenge since no formal mechanism is in place for faecal sludge treatment and management. Inefficient treatment of faecal sludge can prove to be harmful to human health and the environment. Effective systems for the management of faecal sludge in various types of toilets are important for sustained use of toilets and for attaining the goal of complete sanitation in rural areas. It may not be feasible nor is it necessary to plan for a Faecal Sludge Treatment Plant at every Gram Panchayat. However, it may be necessary to plan for a cluster of GPs / or at Block level or a few in every district. Accordingly, this technical note provides information on the challenges of and need for (Faecal Sludge Management (FSM) and a service value chain, technologies of emptying, transportation and end treatment of faecal sludge and the Planning process for faecal sludge management.

Technology wise nature of FSM requirements

FSM is an important component of O&M of sanitation facilities. The following section discusses the FSM requirements of different types of toilets.

A. Twin pit latrines- In case of twin pit latrines, the liquid and gases generally infiltrate into thesurrounding soil and solids are allowed to decompose through aerobic processes in the pit. Thesecond pit is connected to the toilet when the first pit gets full. The first pit is then closed

until the waste decomposes and turns into manure. This decomposition process takes at least a year. Apart from pit emptying; these types of toilets do not need external FSM.

B. Single pit latrines- When the single pit gets filled up, it cannot be used until the waste has completely decomposed. The users have no option but to revert to open defecation in suchcases. Thus, these toilets need to be converted into twin pits by digging a second pit and connecting it to the toilet by a junction chamber.

C. Septic tank type toilets- In case of septic tank type toilets, anaerobic bacteria decomposethe waste discharged into the tank. The rate of accumulation of sludge is faster than the rateof decomposition. Therefore, the accumulated faecal sludge must be periodically removedfor further management. The systems for management of septage are available in big cities. However, in case of rural areas or census towns, the septage is sometimes disposed of in openspaces or in water bodies. Considering the harmful impacts of such practices, appropriatesystems for emptying, transporting and managing septage need to be developed.

FSM in rural areas and census towns

According to Census 2011, out of a total of 121.0 crore people of India, 83.3 crore lives in rural areas and constitutes 68.84 per cent of the total population. On the other hand, rural areas are characterized by rapid increase of census towns (CTs) in the recent years. Between 2001 and 2011, CTs in the country have grown from 1362 to 3894. This situation clearly highlights the need for FSM in these areas. Almost every rural household today have access to usable toilet. The type of such toilets may be: twin pit types, single pit types, biogas and septic tank types etc.

In CTs and rural India, single pits and septic tanks account for nearly 50% of the households. Where people have twin pit toilets the households need to be trained in pit-emptying (after the sludge got decomposed), and in the case of septic tanks faecal sludge has to be safely emptied and transported to designated Faecal Sludge Treatment Plants. Thus, in the coming years and FSM will become crucial in ensuring sustainable sanitation

for all. Therefore, FSM interventions, including setting up of new systems as well as expansion, strengthening and upgrading of existing systems ‘is necessary in rural areas of India – either for cluster of GPs level or at Block level.

Importance of FSM

Inefficient treatment of faecal sludge can pose risks to human health and the environment.Proper management of accumulated faecal sludge in rural areas is a challenge as there is noformal mechanism in place for the sludge’s treatment and management. Thus, proper FSM can be fulfilled in the following ways:

1. In case of twin pit latrines, though the waste is decomposed on-site, shifting to the second pit and emptying the used pit needs to be done on time.

2. Single pit latrines need to be converted into two pit latrines or some alternative technology needs to be thought of.

3. Considering the large number of septic tank type toilets which in many cases are technically flawed, systems for cleaning and de-sludging of septic tanks are necessary. Effective system for desludging of septic tanks is important for sustained use of toilets and attaining the goal of complete sanitation in any state

FSM value chain

For efficient FSM, one needs to understand the entire FSM value chain. The service value chain includes safe containment of sludge, safe emptying and transportation, treatment and disposal/ reuse of faecal sludge. Each of these value chain components needs to be addressed properly to prevent health and environmental hazards in rural areas. An overview of treatment technologies, along with their treatment objectives and functionality are included in details in this section.

a) Safe containment of sludge: Promoting an appropriate and area-specific containment technology is vital and the Central Public Health and Environmental Engineering Organization (CPHEEO)’s norms should be followed for implementing safe containment technologies.

Principally, there are three important technologies for safe containment of the faecal sludge inrural areas:

- Twin pit pour flush toilet
- Septic Tank Toilet
- Biogas

In case of single or two pit latrines, the pit should not be located near a water source or be built on areas having higher groundwater tables. Technical accuracy is crucial for all types of toilets. Inappropriate construction of septic tanks can lead to leakages in the tank, limited or no access to tanks, chocking up of the toilet, or inappropriate treatment of waste, etc.

b) Safe emptying and transportation:A septic tank is a combined sedimentation and digestion tank where solids settle down to the bottom, accompanied by anaerobic digestion of settled solids (sludge) and liquid, resulting in reasonable reduction in the volume of sludge and biodegradable matter and release of gases. A substantial portion of solids escape with the effluent whenever a septic tank has not been desludged in a long time (a period that exceeds the intended period). Therefore, septic tanks need to be desludged by automatic or human operated technologies. It is very important toavoid any direct human contact with faecal sludge, and the safety measures should be followed. There are many technologies used for emptying and transportation such as vacuum truck,tractor mounted vacuum tanker, Gulper etc.

Each of these value chain components needs to be addressed properly to prevent health and environment impacts in rural areas due to indiscriminate disposal of hazardous faecal waste. Considering the FSM service value chain and its components, the selection of appropriate technology option for rural areas and its effective management is important. Various technology options for collection, transportation and treatment are briefly listed below.

c) Treatment: Efficient treatment of faecal sludge is critical considering the characteristics of faecal sludge.Many technologies of faecal sludge treatment like sewage treatment plants (STP) are beingused in urban areas. However, these technologies cannot be used in rural areas due to financialconstraints and inadequate O&M systems. A few low cost and simpler technologies, such

asunplanted drying bed, deep row entrenchment, planted drying bed, tiger bio-filter and DEWATScan be used in rural areas for treating faecal sludge.

d) Use/management: The end-products of the FSM can be reused and managed well. The treated water fromtreatment plants can be used for agriculture and the compost can be used as manure foragriculture/ kitchen gardens. In big cities, through effective garbage disposal, the compost can bemixed with biodegradable garbage to produce superior quality manure. Even in Gram Panchayats manure can be used for developing local parks, and gardens within GP office area.

Technologies for safe collection, transportation and treatment of faecal sludge

The collection of faecal sludge from septic tank/soak pit and its safe transportation is the most important aspect of FSM practice, as all subsequent processes depend on safe transportation. Some of the available technologies for collection and transportation are described on the following pages.Due to growing concerns about faecal sludge's adverse impact on the environment and human health, scientific treatment of faecal sludge is very crucial. Presently, there are various globally adopted technologies and processes for treatment of faecal sludge.

Steps for effective FSM

STEP 1: Know your pits and tanks

- Estimate the number of single pits and septic tanks in the area
- Know the typical size of the pits and tanks in the area
- Septic tanks must be desludged every three to five years
- Pits can be desludged when full — it's better to desludge them every five to six years

STEP 2: Retrofit (on-site) containment systems

(a) All single pits

- Convert to twin pit toilets (by adding a pit through a junction box)
- Or vermi —filter toilet or toilet linked to a biogas plant

(b)Septic tanks without soak pit

- Add soak pit and then initiate FSM practices

STEP 3: Regulating desludging operators

- Identify all operators in the area
- Build capacities and certify them
- License their operations and introduce regulation

STEP 4: Plan faecal sludge treatment

OPTION 1: Dispose at the nearest STP/FSTP	OPTION-2:Plan a new rural FSTP
1. Within a radius of 10- 15 km	1. Identify suitable land
2.Obtain permission to dispose of at the plant	2. Determine a cluster of villages to be served by the new rural FSTP based on the distance of the FSTP form the villages and how accessible the village roads are
3.Ascertain spare capacity of the plant	3.Implement a trench for licensed operators to dispose of sludge temporarily
4.Identify a cluster of villages from which the sludge can be disposed at this plant	4.Plan for an FSTP of appropriate capacity
5. Get all licensed operators for those villages to dispose of sludge at the plant	5.Consult a technical agency/expert
6.if successful, go to step 5	

STEP 5: Determine your business model

(i) Identify revenue sources

- Desludging fee
- Fee for disposing of sludge at the plant by a private truck operator
- Sale of treatment plant products such as manure, bioslurry, etc.
- User fee, taxes, grants
- Other sources — e.g. : hoardings with advertisements at the treatment plant

(ii) Determine operational costs

- Desludging costs
- O&M of treatment plants
- Costs of management

(iii) Decide business model

- Fee structures for APL/BPL families
- User pay per service versus monthly fee to the GP

STEP 6: Implement FSM

Implement desludging

- Devise a plan for scheduled desludging
- E.g. Tender an entire village to a licensed operator for desludging every four years —recommended for disposal at the existing STP
- E.g.Desludge a cluster of households in a block (every week) to cover the cluster-recommended for disposal at a dedicated FSTP
- Monitor license conditions, customer grievances and disposal of sludge

Implement treatment plant

- Identify capital
- Obtain permits
- Float a tender for plant construction
- Build the plant
- Outsource O&M to a local entrepreneur or CBO
- Monitor untreated sludge disposal at the plant

PowerPoint Slides

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

DAY – 1

Afternoon

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, JJM, Rurban Mission, and XV Finance Commission for setting up wastewater management and FSM units in GPs or at Cluster level
2. Distinguish one-time (capital cost) expenses for setting up infrastructure facilities from the recurring expenses / annual maintenance expenses in order to support the Operation and Maintenance (O & M) of such units
3. Make an assessment of O & M expenses (through a rough budgeting exercise)and the sources of funds / income to be able to meet such expenses in order to have a clarity on the financial sustainability
4. 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
Blank budgeting format

Materials Required

Relevant lecture with PowerPoint
White Board with markers

Session Outline

- Schemes /sources of funds for wastewater management units / FSM units
- 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
- Viability gap and how to fill in the gap

PROCESS

Note to the Trainer

The trainer should bear in mind the 'outcome expected of this session'. It's about funds – for one time investment and the sources; and it's about the recurring expenses for operation and maintenance – and the sources of income / funds in order to ensure benefits accrued sustain for long.

Secondly, put across to the participants, that there is no problem of funds as far as one-time investment is concerned. The issue lies in find funds for sustainable operation and maintenance of the facilities created. How to realize it?

Setting up a wastewater management systems involves creating additional infrastructure structure such as soak pits, drainage lines, and recycle and reuse arrangement etc. For such onetime investment, funds can be availed from the Swachh Bharat Mission. The details are given in the technical notes below. Where setting up wastewater management system has been included in the ICAP of Rurban Mission, Rurban Mission funds can be used. For all labour components involved in constructing drainage lines, or for setting up of wastewater systems MGNREGS can be fully made use of. 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 day to day Operation and Maintenance (O & M) expenses. For this, there is no government assistance, except that the XV FC funds can be used, to some extent. Sixty per cent of the XV FC funds can be used for water and sanitation (WASH) related expenses. Wastewater 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 for the GPs to raise own source revenues to be able to meet such O & M expenses. One of the sources could be collecting a lump sum as Water and Sanitation charges (combining drinking water, solid and liquid waste management services) from households, and from shops and establishments along with annual house tax / trade license etc.

In the event of appointing a professional private agency (NGO) to manage wastewater on behalf of the GP, the agency appointed (i.e. contractor) has to be paid as per service contract agreement. The payment terms can be quarterly, half-yearly or annual. Whatever it is, the GP must determine 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 / or as directed by the bylaw of the Gram Panchayat / notice given by the GP.

Wastewater management is an expenditure proposition. People may not recongise as much value to the scientific disposal of wastewater as they give for getting yard connection for drinking water supply or for periodical maintenance of wastewater systems. The GP must choose a technical infrastructure / wastewater management technology that may involve least O & M. It should not involve electric power to run, which may hand a electricity bill every month. This must be avoided.

In case it showed a deficit,we need to find a 'viability gap funding'. This can come from the XV FC funds. Or the GP can consider enhancing the user service charges for water and sanitation services. 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.

TECHNICAL NOTE TO THE TRAINER

MoPR has developed guidelines for the Gram Panchayat Development Plans (GPDP) and has also helped States to come up with State-specific guidelines for GPDP, which converge all the funds that Panchayats have at their disposal such as XIV FC funds, Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) FUNDS, AND Swatch Bharat funds. The GPDP plans are also an opportunity for the community to be engaged in setting the agenda for local development and finding local solutions t

development issues. The focus of GPDP would also to encompass all the SDGs so that they are achieved in timely manner. The capacity of the GPs to prepare the DPGDPs has been greatly augmented through focused implementation of the People's Plan Campaign (PPC) initiated by MoPR wherein the GPs are facilitated by all the line departments implementing various Central and State schemes. Considering that the XV FC funds will now also be available to the Intermediate and District Panchayats, MoPR has also prepared the framework for the development of Block and District Plans and circulated it to the States.

With the increased availability of resources at the GP level, this also is an opportunity for ensuring sustainable service delivery coupled with livelihood generation at village level through promoting professionalization of services for the GPs. If utilised to the fullest, this can further lead to skill development of the local human resources available at the GP level to ensure that the sustainability of the whole system is ensured and any kind of a slip-back or failure of services is avoided.

Sources of Funds

Sources of funds for setting up WWM Units: Setting up a wastewater management unit involves laying pipelines for underground drainage or digging open drainages; setting up appropriate wastewater recycling mechanism / technology at the disposal point etc. For such onetime investment, funds can be availed from the JJM or under Swachh Bharat Mission-G. Where wastewater disposal has been included in the ICAP of Rurban Mission, Rurban Mission funds can be used. For all labour components involved in setting up such system 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 wastewater management units in GPs go like this. There is a provision of Rs.280 per capita for GPs less than 5000 population; and Rs.660 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 Faecal Sludge Management (FSM) plants every district has a provision of upto Rs.50 lakhs. 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 if there are plants for setting up toilet linked 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 GPs must engage in a budgeting exercise for prudent financial planning.

Capital cost

This is one-time Expenditure that pertains to facility creation for wastewater disposal and treatment. The physical facilities / technologies required for setting up such units were discussed in the previous session. Let us not repeat it here.

Recurring Cost

The recurring cost may include payment to be made to the third party agency if wastewater management service is contracted out to private service provider. This is often known as Operation and Maintenance expenses. 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 wastewater treatment and disposal 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.

Meeting the minimum service level standards in the delivery of services would provide the right motivation to the consumers to bear the O&M costs. These charges, however, would have to be judiciously decided upon so that the consumers are asked to pay only to the extent they can afford. It must be determined keeping in mind the paying capacity of majority of the consumers.

Service Options

Service levels selected to cater to user's requirements and frequency of service delivery expected 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 for water and sanitation services at the local level. The followings are the options for the GPs.

Service Options for Wastewater Management

A. Grey water Management – Service Level Options

1) Contract for Comprehensive Liquid Waste Management
2) Contract for Operation and Maintenance of Liquid Waste Treatment Plants
3) Contract for Supply of Skilled and Unskilled Human Resources for Liquid Waste Management

B. Black water Management – Service Level Options

1) Contract for Comprehensive Faecal Sludge Management
2) Contract for Operation and Maintenance of Faecal Sludge Treatment Plants
3) Contract for Collection and Transport of Faecal Sludge
4) Contract for Emptying of Toilet Pits

Depending on what service is contracted out, the GP can choose options. The cost implication may vary depending on which option a given GP chooses to contract out. The explanation about each one of the service option is discussed in the next session.

Financing Contract Deal

Some GPs set up wastewater management units on social enterprise mode – meaning the expenditure is offset by another source of income to the GP. The income from other revenue sources such as issuing trade licenses or contracting out common fish pond etc. can be resorted to. Yet, there is a need to collect user charges. A portion of 15^{th} 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 in the form of simple (dry run of) expenditure and sources of income to meet such expenses may be attempted. 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.

Achieving Operational / Financial Sustainability: The success and sustenance of any such systems, most often, depend on financial sustainability. In other words, operational sustainability of wastewater systems rests on financial viability to pay the contractor (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 drinking water and sanitation services.

Financial Viability

The level of sophistication / technology selection could vary depending on the financial capacity of the Gram Panchayat. It is good to keep the 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. Wastewater projects can only prove to be environmentally beneficial, and render healthy living environment for the people. It can avoid many possible diseases and thus, reduce the diseases burn. As a result it can contribute to savings of households in terms of health expenditure, which is an indirect benefit. The GP should take this perspective when it comes to economic return of wastewater systems. This justifies going for cost recovery through levying of user fees from the beneficiaries, prescribing appropriate fees for the services rendered. 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 can be considered.

We need to note down, attracting bids / professional service providers is possible only if there are strong indications of financial viability, and possibility for getting viability gap funding to be able to pay the contractors. 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)

DAY – 2

Forenoon

Session – 6
Service Contract Management

Session Outcome

Upon completion of this session, the participants shall:

1. Know the basics of service contract agreements, bidding, and selection of waste management service providers on contract
2. List out possible components of work to contract out and consider points to write down a contract that will be suitable for a given GP / cluster of GPs
3. Formulate a call for Expression of Interest / bid, and describe the official procedures involved in selecting an agency for awarding the contract
4. Apply the knowledge acquired 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
White Board with markers
Sample call for EoI / bidding format
Model service agreement copies

Session Outline

- Basics of Contract Management (Third Party Engagement & Service Contracts)
- List out Service Options for wastewater management
- Required licenses, sanctions, permissions and compliances

- Provisions for Contract in State PR Acts
- 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 wastewater management services does not always have to mean GP managing directly, and that rather it could mean managing through a service contract agreement with a professional wastewater 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.

TECHNICAL NOTE TO THE TRAINER

Basics of Contract Management

Following are certain essential aspects to be considered by the GPs while decidingto contract out wastewater 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 service 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, wastewater management, faecal sludge managementetc. 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.

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 the 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 contract perform the duties mentioned in the contractual agreement. The terms and conditions mentioned in 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 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 full fill the terms of the contract to meet the wastewater 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 satisfactory to both parties

ToR for Wastewater Management

On ascertaining the benefit of outsourcing services, the GP shall prepare a ToR(Service Contract Agreement) 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 Actsand Rules have issuedthere 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.

Service Options for Wastewater Management

A. Grey water Management – Service Level Options

1) Contract for Comprehensive Liquid Waste Management
2) Contract for Operation and Maintenance of Liquid Waste Treatment Plants
3) Contract for Supply of Skilled and Unskilled Human Resources for Liquid Waste Management

B. Black water Management – Service Level Options

1) Contract for Comprehensive Faecal Sludge Management
2) Contract for Operation and Maintenance of Faecal Sludge Treatment Plants
3) Contract for Collection and Transport of Faecal Sludge
4) Contract for Emptying of Toilet Pits

Deciding on one or a Bundle of Services

Not all contracting models are suitable for each of the WWM operations. GP functionaries may adopt one or more of the contracting models mentioned. The GPs may decide to bundle certain services while contracting out WWM 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. This is discussed in detail the next session.

Options for GP for Selection of Contracts: As there are wide-ranging variations in demographic size, geographic location, types of infrastructure facilities in view, theGPs 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 wastewater 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, and the quantum of wastewater generated, the GP can opt for one of the following contract model.

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. Small GPs may have simple wastewater drainage line that gets water flowing only one or two hours in the morning and evening. Such GPs can appoint one trained person to take care of one sanitation worker, who shall take care of proper flow of wastewater to the disposal point.

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. They can be trained under the DDU-GKY of GoI, in one of the nearest skill training centres.

Tendering, Contract Management and Supervision

Gram Panchayats shall facilitate construction, operation and maintenance of grey water processing facilities and associated infrastructure on their own or with private sector participation or through any agency.It must aim at optimum utilisation of grey water adopting suitable technology adhering to the guidelines issued by Government of India or as under the JJM, SBM-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 grey water management facilities and associated infrastructure for recycle and reuse.

Make adequate provision of funds for capital investments as well as operation and maintenance of grey water management services in the annual budget.The GP may ensure that funds for discretionary functions of the GP have been allocated only after meeting the requirement of necessary funds for wastewater management and other obligatory functions of the GP.

GPs may enter into contract with private service providers for provision of specified grey water or black water management services for scientific disposal. 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 grey water / black water management 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 reuse of grey water is planned or toilet linked bio-gas is set up for distribution through a community kitchen or 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.Service Level Benchmarks, and monitoring indicators are dealt with in the subsequent sessions.
- 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 Private 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

Draft Service Contract Agreement

The draft service contract 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 grey water / black water management facility; Service level condition and penalties etc. See annexure 1 – 7 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 e-Gramswaraj 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 promptlywithin 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 empaneled 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 extractsof Model Contract Agreement given in the MoPR guidelines for Gram Panchayats are given as annexures here.

PowerPoint Slides

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

DAY – 2

Forenoon

Session – 7

Typologies of Service Contracts

Session Outcome

Upon completion of this session, the participants shall:

1. Know a schematic of broad model contract typologies for engaging professional external agencies for grey water management at GP level,
2. Know a schematic of broad model contract typologies for engaging professional external agencies for black water management at GP level,
3. Illustrate the application of appropriate type of service contract to manage grey water and black water in one's Gram Panchayat
4. Identify / restate the Service Level Bench Marks (SLBs) for providing wastewater management services

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
White Board with markers
Copies of Model Contract forms may be distributed

Session Outline

- Model Contract Typologies for grey water management
- Model Contract Typologies for black water management
- Application of appropriate type in varying context of GPs

PROCESS

Note to the Trainer

In this session, the trainer introduces various typologies of service contract agreements. It can be comprehensive, or only about O &M, or about supply of skilled and unskilled manpower only. This session helps narrowing the purpose to fix third party agencies for professional management of grey water and black water at GP level. How to define the scope of a contract? What and what elements must go into such contracts is the focus of this session.

TECHNICAL NOTE TO THE TRAINER

Service Options for Wastewater Management

A. Grey water Management – Service Level Options

1) Contract for Comprehensive Liquid Waste Management
2) Contract for Operation and Maintenance of Liquid Waste Treatment Plants
3) Contract for Supply of Skilled and Unskilled Human Resources for Liquid Waste Management

B. Black water Management – Service Level Options

1) Contract for Comprehensive Faecal Sludge Management
2) Contract for Operation and Maintenance of Faecal Sludge Treatment Plants
3) Contract for Collection and Transport of Faecal Sludge
4) Contract for Emptying of Toilet Pits

Grey water Management – Service Level Options

1. **Contract for Comprehensive Liquid Waste Management**: The contract aims to improve management of liquid waste concerning the drainage network and treatment plant in the GP in question as per 'the scope of work' provided. The Contractor shall be responsible for regular cleaning of the drains, its minor repairs, operation and maintenance of the treatment units, including the availability of all the tools, spares, consumables, skilled and unskilled labour as per the required qualifications for the functioning of the liquid waste collection system and treatment plant. The Contractor shall also be responsible for coordinating with

service providers for special maintenance and agencies for non-potable use of treated effluent, as required.

2. **Contract for Operation and Maintenance of Liquid Waste Treatment Plants**: The contract aims to improve operation and maintenance of liquid waste treatment plant in the GP in question as per 'the scope of work' provided. The scope of work may cover all the activities required for operation and maintenance of liquid waste management within the GP as defined in the contract signed. For instance, the Contractor shall be responsible for operation and maintenance of the treatment units, including availability of all tools, spares, consumables, skilled and unskilled labour as per the required qualifications for the smooth functioning of liquid waste treatment plant. The Contractor shall also be responsible for coordinating with service providers for special maintenance and agencies for non-potable use of treated effluent, as required. The treatment procedures and the units will vary depending on the treatment technology adapted. It is advisable that the O&M procedure for the plant is drafted in consultation with the technology provider.

3. **Contract for Supply of Skilled and Unskilled Human Resources for Liquid Waste Management**: The purpose of the contract is to appoint a service provider for supply of skilled and unskilled human resources for liquid waste management in GP as per detailed scope of work defined in the contract. The service provider / Contractor shall be responsible for supply of human resources as per requirement for cleaning of drains, routine operations, maintenance of drainage network, operation and maintenance of treatment plant, and undertaking its minor repairs.

   There may be labourers required for maintenance of collection network; there may be technicians required at treatment unit; there may b security guard; supervisor; plumber; mason; and electrician. Some of them may be required for fully-time, and others may be required for part time. There may be

different skill-sets and training required for such personnel – starting from functional literates to ITI diploma holders etc.

Other Considerations for Grey Water Management

Not all contracting models are suitable for each of the WWM operations. GP functionaries may adopt one or more of the contracting models mentioned. The GPs may decide to bundle certain services while contracting out WWM operations to build accountability and efficiency in the system. For professional operation and maintenance of SWM services at the GP level, theMoPR 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, theGPs 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 wastewater management services in the GPs.

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

Selection Criteria – Grey Water Management

S.No	Type of Contract	Suitability and Justification
1	**Model Type 1** Contract for Comprehensive Liquid Waste Management Service	**Selection Criteria (indicative)** • Population more than 5000 • Drainage network present in the GP which is connected to treatment plant. • Fair demand for reuse of treated effluent • Less number of houses with on-site treatment units. • Treatment facility is present near the GP / setting up is feasible.A model contract agreement is provided in annexure - 1
2	**Model Type - 2** Contract for O&M of Liquid Waste Treatment Plant	**Selection Criteria (indicative)** • Population more than 5000. • Treatment facility is present near the GP / setting up is

		feasible. • GP can manage / supervise the maintenance of drains and provision of new house connections to drainage network if required on its own. • A model contract agreement for O & M of Plants and Equipments is provided in Annexure - 2
3	**Model Type - 3** Contract for Supply Skilled and Unskilled manpower for Liquid Waste Management Services	**Selection Criteria (indicative)** • Population more than 5000. • Drainage network is not too long and there are fewer drains in the GP. • A model contract agreement form is inAnnexure - 3

Service Level Benchmarks (SLBs)

This will be discussed in detail in the next session. However, having discussed about various types of service contracts for grey water management, it will be in order to have at least a shallow understanding of the rationale behind the Service Level Benchmarks with regard to grey water management. They can be listed as below.

- The grey water generated by all the households needs to be provided with proper end treatment to ensure a certain level of hygiene and cleanliness. Hence, it needs to be connected to a drainage line that is further connected to a treatment unit.
- For efficient draining of grey water through drainage system, it is important that the drains are cleaned periodically
- The filter media of the soak pits need to be cleaned / changed periodically; this ensures effective filtration of water prior to percolation. Such kind of filtration is necessary to ensure that the sources are not contaminated due to percolation of grey water
- The GP has trained manpower who can manage grey water drainage lines and take care of the treatment plants at disposal point.
- Treated grey water serves as a resource (reusable) for irrigation in the water stressed areas, or for flushing school / anganwadi toilets.

HR (Personnel) Requirement – Wastewater Management

Personnel Requirement	**1.Labour for maintenance of collection network**
No Required	Full time / Part time
Educational Qualification	Not essential (Functional Literacy Desirable)
Experience	Should be physically fit for cleaning the drains
Job Description	• Cleaning and de-slitting the drains / gutters and ensuring its disposal in environmentally responsible manner. • Minor repairs like-replacement of small sections, chamber cover, fixing of leakages in the drainage lines, chambers, manholes, etc. • Maintaining a log of locations that encounter frequent blockages.
Personnel Requirement	1. **Technician at Treatment Unit**
No Required	Full time /Part time
Educational Qualification	ITI trade of Mechanic
Experience	Should be physically fit for cleaning the drains
Job Description	• Cleaning and de-slitting the drains / gutters and ensuring its disposal in environmentally responsible manner. • Minor repairs like-replacement of small sections, chamber cover, fixing of leakages in the drainage lines, chambers, manholes, etc. Maintaining a log of locations that encounter frequent blockages.
Personnel Requirement	**2. Technician at Treatment Unit**
No Required	Full time /Part time
Educational Qualification	ITI trade of Mechanic
Experience	6 months operation and maintenance various waste water Treatment technologies. Conversant minor repairs of components of treatment plant and electromechanical devices.
Job Description	• Operation of screens, etc. for removal of inorganic/unwanted materials like-plastic, grit, paper, etc. as per the schedules. • Ranking of screens in the screening chamber and disposal of screenings in environmentally responsible manner, if applicable. • Operations of treatment units as per the schedule prescribed by the technology provider. • Periodic collection of sludge and its treatment, as applicable. • Maintaining conducive conditions in each unit as described by technology provider. • Replacement / replenishing of bio-media/ culture as required. • Routine cleaning of the filter beds, aeration tanks, sludge holding tanks, etc., as applicable.

	• Operation of disinfection unit, optimization of chemical dosage required as per the quality of incoming liquid. • Servicing & overhauling of all the electro-mechanical devices (pumps, motor, blowers, light fittings, control panel, etc.) as per the schedule. Maintaining cleanliness and hygiene in the unit and its premises.
Personnel Requirement	**3. Security Guard**
No Required	Full time
Educational Qualification	Literate(preferred) /Retd. Military man
Experience	1 year insecurity functions of infrastructure
Job Description	• Avoiding any illegal activities in the premises. • Avoid trespassing and vandalizing in the premises. • Informing concerned personnel if • any foul smell, leakage, overflows are observed in the treatment units. • Prevention of hampering and • dumping of waste by public or cattle. • Maintaining a complaint register for recording date wise details of the complaint and a visitors register.
Personnel Requirement	**4. Supervisor**
No Required	Part time /Full time
Educational Qualification	Graduate in Science stream
Experience	1 year in operation and maintenance of treatment plant and collection network. Conversant with the technologies adopted for grey water treatment.
Job Description	• Informing GP authorities for any major repair / replacement required. • Undertaking special repairs in the locations that encounter frequent blockages in consultation with GP. • Periodically checking if the house drains are connected to an inspection chamber with a screen prior to connection to the public drains. • Routine testing of effluent parameters like Biochemical Oxygen Demand(BOD), Chemical Oxygen Demand(COD), pH, Total Suspended Solids(TSS), Total Nitrogen (T-N) and Total Phosphorus (T-P), etc. prior to its discharge and maintaining its log. • Contacting agencies / local farmers for use of treated water for non-potable purposes like irrigation. • Coordinating with technology providers in case there are any issues in functioning of the treatment unit. • Checking the efficiencies of all the electromechanical devices and informing the authorities for any major repairs / replacements required.

	• Checking if all the civil structures are water tight, taking corrective actions in consultation with GP. • Identification of cause of the complaint and its redressal. • Maintaining record of the volume of water received, water treated, water reused, stock of consumables, repairs undertaken, etc.
Personnel Requirement	**5. Plumber**
No Required	On call as per requirement (within 24hrs after requirement is raised)
Educational Qualification	ITI trade for plumber
Experience	1 year in plumbing services, especially sewage drains and sanitary Fittings
Job Description	Carrying out the repair works in the collection network and treatment units as required.
Personnel Requirement	**6. Mason**
No Required	On call as per requirement (within 24hrs after requirement is raised)
Educational Qualification	Preferred ITI trade of mason/ Sanitary Hardware
Experience	1 year in basic masonry works and water proofing
Job Description	• Minor repairs in the civil structure. • Water proofing of the units, if required.
Personnel Requirement	**7. Electrician**
No Required	On call as per requirement (within 24hrs after requirement raised)
Educational Qualification	Diploma in electrical engineering/ full time ITI course of electrician
Experience	2 years in electrical works, major repairs of electro mechanical Devices specially pumps, motors, etc.,
Job Description	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.

Black water Management – Service Level Options

1. **Contract for Comprehensive Faecal Sludge Management**: The contract aims at management, collection, transport and treatment of faecal sludge generated in the GP in question. The service provider / Contractor shall be responsible for human resource, equipment, vehicles, etc. for contactless de-sludging of septic tanks,

transport of sludge to the treatment unit and its treatment in environmentally responsible manner for stipulated period of time as per the scope of work.

2. **Contract for Operation and Maintenance of Faecal Sludge Treatment Plants**: The contract aims to operate and maintain the faecal sludge treatment plant in the GP in question. The service provider / Contractor shall be responsible for human resources, equipment, etc. for operation and maintenance of the faecal sludge treatment plant and the sale of the by-products for stipulated period of time as per the scope of work.

3. **Contract for Collection and Transport of Faecal Sludge**: The contract aims to manage collection and transport of faecal sludge generated in the GP in question. The service provider / Contractor shall be responsible for human contactless de-sludging of septic tanks and transport of sludge to the treatment unit in environmentally responsible manner in stipulated period of time as per the scope of work.
4. **Contract for Emptying of Toilet Pits in GPs:**The contract aims to provide services for regular emptying of toilet pits in GP as per the scope of work provided in the contract. The service provider / Contractor shall be responsible for checking the stability of waste in the toilet pits prior to emptying, emptying of pits, transporting the stabilized waste (manure) to a designated location for sun-drying, its storage and marketing. The Contractor shall provide all the tools and tackles, skilled and unskilled labour along with safety gear required for emptying of the toilet pit.

Other Considerations - for Black Water Management

Not all contracting models are suitable for each of the Black water operations due to reasons such as variation in the socio-demographic and settlement patterns in Indian villages. GP functionaries may adopt one or more of the contracting models mentioned, going by locally decided criteria. The GPs may decide to bundle certain services while

contracting out Black water operations to build accountability and efficiency in the system. For professional operation and maintenance of black water management services at the GP level, theMoPR has issued guidelines for selection of contracts. They are given in the annexure.

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

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

Selection Criteria – Black Water Management

S.No	Type of Contract	Suitability and Justification
1	**Model Type 1** **End to end contract for faecal sludge management**	**Selection Criteria (indicative)** • Population more than 5000 • Usage of single pit toilets and septic tanks is predominant. • Treatment facility is present near the GP/ settingfeasible.A model contract agreement is provided in annexure -4
2	**Model Type - 2** **O&M of treatment plant**	**Selection Criteria (indicative)** • Population more than 5000. • Treatment facility is present near the GP / setting up is feasible. • GP can manage / supervise the desludging of pits / septic tanks and transport of septage on its own Annexure - 5
3	**Model Type - 3** **Collection and transport of septage / slurry**	**Selection Criteria (indicative)** • Population more than 5000. • Treatment plant not nearby / setting up not feasibile. • Not enough quantity of septage is generated which

		can be treatedwithin the GP Annexure –6
4.	**Model Type –4** **Pit emptying services**	**Selection Criteria (indicative)** • Population less than 5000 • Use of twin pit toilets or any similar system generating stabilized waste in predominant. • No specific and complex treatment is required • See Annexure - 7

Broad Service Level Bench Marks (SLBs) – Black Water Management

This will be discussed in detail in the next session. However, having discussed about various types of service contracts for black water management, it will be in order to have at least a shallow understanding of the rationale behind the Service Level Benchmarks with regard to black water management. They can be listed as below.

- Households with single pits toilets having access to de-sludging facility
- Institutions, commercial establishments and other buildings with single pits toilets having access to de-sludging facility
- Households with septic tanks having access to de-sludging facility
- Institutions, commercial establishments and other buildings with septic tanks having access to de-sludging facility
- Whether there is availability of facility for safe transportation of septage in the village
- Number of septic tanks connected to soak pits
- The waste material from septic tanks are disposed into in the surrounding or into any water bodies.
- Facility for scientific treatment of collected waste without having to transport long distances.

Option for a Cluster of GPs

Sometimes, it may happen that a cluster of GPs are willing to enter into a single contract for a particular service from the above-mentioned contracts due to any of the following reasons:

- For the purpose of cost-effectiveness and quantum of work for the GPs and / or the service provider, it would be better for a single agency to cater to multiple GPs located nearby.
- In case of solid waste management, liquid waste management or faecal sludge management, there is a common treatment unit located nearby to the group of GPs.

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 and each GP will be responsible for the payment to the agency according to the quantum of work in its jurisdiction. This process can also be replicated at the block level.

Option for 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 due to various reasons. These GPs may have the following features (indicative):

- The population in the GP is less than 500 and is fairly stable.
- The GP has small, scattered habitations.
- The GP is located in a geographically remote area.
- The GP preferably has a single PWS with extremely simple water supply arrangements.
- The GP generates very small quantities of solid waste and faecal sludge.
- The GP does not have any drainage network for disposal of liquid waste.
- The GP does not have more than one public toilet.

In this case, these GP can appoint two trained persons – one to take care of all services related to drinking water supply and another to take care of all services related to rural sanitation – for professionalization of O&M services in their village.

PowerPoint Slides

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

DAY – 2

Forenoon

Session – 8

Professionalization of Service Delivery

Session Outcome

Upon completion of this session, the participants shall:

1. Recognise the need for professionalising the wastewater management at the GP level
2. Discuss the broad parameters and essential indicators of service level bench marks for a GP level wastewater management, (and FSM units, if any)
3. Articulate how periodical use of monitoring formats can steer the GP towards efficient and scientific management of grey water and black water
4. Explain the rationale behind the indicators and methods of measurement so as to inspect and judge if private service providers deliver as per deliverables
5. Organise the required manpower - Skilled and Unskilled - with appropriate training, experience and skill-sets in order to operate and maintain the wastewater management facilities
6. Identify the local employment potential of sanitation services in general and wastewater / FSM related 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

Materials Required

Relevant lecture with PowerPoint
White Board with markers

Session Outline

- Professionalization of wastewater management services
- Service Level Benchmarks for wastewater management / FSM
- Monitoring Indicators and the rationale behind indicators
- Monitoring Service Delivery – Indicators
- Skilled and Unskilled Manpower Requirements
- Local employment potential of sanitation and waste management services
- Institutional arrangement for periodical monitoring

PROCESS

Note to the Trainer

The trainer must put across, what is professionalization in the context of wastewater management, and why is it required?Setting up of wastewater management service is a professional activity demanding certain skills, specialized training, and involvement of appropriate technologies. Professionalization is required essentially to fulfill certain level of service standards / Service Level Benchmarks (SLBs). In order to achieve the SLBs, and to ensure sustainable service delivery, Panchayats can opt for either carrying out O & M of the facilities by itself or outsource the services to contractors. The model of contract has to be locally modified to suit local conditions by the GPs/ PRIs. Where required the GPs can consult lawyers as well. The professionalization of wastewater management services has two major advantages: (a) Ensure professional management of the infrastructure created;and (b) Ensure the benefits to sustain for long-term. Besides these, professionalization of these services will help the GPs to attain following goals.

- Sustainable Management of Infrastructure
- Accountable, professional, specialised management
- Local skill development and livelihood generation
- Achieving economies of scale
- Identification of possible revenue generation options

Service Level Benchmarks (SLB): Towards effective management of wastewater 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.

Professionalization demands trained manpower. Therefore, it requires manpower of skilled and unskilled nature. They need to have undergone appropriate training. The experience and skill-sets required especially to be able to attend to preventive and corrective maintenance activities. 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, wastewater management Unit can help local poor get employment.

The trainer shall discuss the broad parameters and essential indicators of service level bench marks for a GP level grey water management 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 100% of the householdsare connected in a drainage network; and regularity of service is ensured.

TECHNICAL NOTE TO THE TRAINER

Grey water Management –Verifiable Indicators

As mentioned earlier, another dimension to professionalization is fixing Service Level Benchmarks (SLBs) for providing certain level of standards that are comparable to national standards. In this section we shall see some of those bench marks, which can help determine if a third party agency appointed to carry out grey water management and faecal sludge management services deliver on par with standards mentioned in the service contract agreement / or as prescribed by the CPCB / SPCB. It also helps gauge if the GP is progressively moving towards achieving 100% coverage of all the households and institutions, scientific treatment of wastewater, and recover wastewater for reuse / non-potable purposes.

Service level benchmarks (SLBs)

For ensuring quality in the delivery of services, we need to provide a set of standardindicators for wastewater management servicesthat are critical. They can serve as the focus point for monitoringthe service levels. The standards, called asService Level Benchmarks (SLBs), have beendeveloped to monitor the performance of theservices using quantifiable parameters.The SLBs for different parameters to gauge management of grey water are as shown below.

No	Parameter	Indicator	Rationale for the indicator	Method of measurement	Unit	Standard Value
1.	Coverage	Discharge of grey water into technically appropriate treatment unit or into grey water drainage system	The grey water generated needs to be provided with proper end treatment to ensure a certain level of hygiene and cleanliness. Hence, it needs to be connected to an efficient treatment unit or to a drainage line that is further connected to a treatment unit	• (No. of HH having grey water discharge facility at HH level or connected to grey water drainage line discharging into a community level treatment unit / total no. of HH) X100	%	100%
				• (No. of institutions, commercial establishments and other buildings having grey water drainage line discharging into a community level treatment unit/ total no. of institutions, commercial establishments and other buildings) x100	%	100%
2.	O&M	2.1. Cleaning of drains	For efficient draining of grey water through drainage system, it is important that the drains are cleaned periodically	• No. of time the drainage lines are cleaned in an year	Frequency	6
		2.2. Operation and maintenance of treatment units	The filter media of the soak pits need to be cleaned / changed periodically; this ensures effective filtration of water prior to percolation. Such kind of filtration is necessary	• (No. of individual / community soak pits where filter media cleaned or changed (or any such	%	100%

			to ensure that the sources are not contaminated due to percolation of grey water	maintenance of other treatment units) / total no. of soak pits (or total number of treatment units)) x100		
3.	Reuse of grey water	Use of treated grey water	Treated grey water serves as a resource for irrigation in the water stressed areas	Is the treated grey water re-used?		Yes

Grey water Management – Indicators and Institutional Arrangement for Supervision

No	Parameter & Indicator	Method of measurement	Unit	Standard Value	Responsible body	Monitoring body	Supervising Body
1.	**<u>COVERAGE</u>** Discharge of grey water into technically appropriate treatment unit or into grey water drainage system	• (No. of HH having grey water discharge facility at HH level or connected to grey water drainage line discharging into a community level treatment unit / total no. of HH) X100	%	100%	Swachhagrahi	Village Secretary	PR Department
		• (No. of institutions, commercial establishments and other buildings having grey water drainage line discharging into a community level treatment unit/ total no. of institutions,	%	100%			

		commercial establishments and other buildings) x100					
2.	**<u>O & M</u>** Cleaning of drains	• No. of time the drainage lines are cleaned in an year	Frequency	6	GP or Service Provider	Village Secretary	PR Department
	<u>O & M</u> Operation and maintenance of treatment units	• (No. of individual / community soak pits where filter media cleaned or changed (or any such maintenance of other treatment units) / total no. of soak pits (or total number of treatment units)) x100	%	100%	GP or Service Provider	Village Secretary	PR Department
3.	**<u>Reuse of grey water</u>** Use of treated grey water	Is the treated grey water re-used?		Yes		GP	District PHED / RWS officials

Black Water Management – Verifiable Indicators

No	Parameter & Indicator	Rationale for the indicator	Method of measurement	Unit	Standard Value
1.	**<u>Desludging / pit emptying</u>** 1.1. HH with single-pit toilets having access to desludging facility	Measures for improved methods for desludging of septic tanks and other toilet pits are necessary for maintaining health of the workers and environment. Manual scavenging of toilet pits is illegal.	• (No. of HH with single pits toilets having access to desludging facility /Total no.of HH with single pits toilets) x 100 • (No. of institutions, commercial establishments and other buildings with single pits toilets having access to de-sludging facility / Total no. of institutions, commercial establishments and other buildings with single pits toilets) x 100	% %	100% 100%
	1.2. HH with septic tanks having access to desludging facility		• (No. of HH with septic tanks having access to desludging facility / total no. of HH with septic tanks) x 100 • (No. of institutions, commercial establishments and other buildings with septic tanks having access to desludging facility / total no. of institutions, commercial establishments and other buildings with septic tanks) x 100	% %	100% 100%
2.	**<u>Transportation</u>** Availability of facility for safe transportation of septage	Safe transportation of the septage / slurry to a treatment unit is necessary to avoid environment and health impacts	Whether there is availability of facility for safe transportation of septage in the village ?		Yes

3.	**<u>Treatment</u>** 3.1 Septic tanks connected to soak pits 3.2. Scientific end treatment of the septage / slurry	The overflow from the septic should not be discharged in open, as it can contaminate the surroundings The waste material from septic tanks should not be disposed in the surrounding or into any water bodies. The collected waste needs further treatment	No. of septic tanks connected to soak pit/total no. of septic tanks The waste material from septic tanks should not be disposed in the surrounding or into any water bodies. The collected waste needs further treatment	% % 	100% 100%

Black water Management – Institutional Arrangement for Supervision

No	Indicator	Method of measurement	Unit	Standard Value	Responsible body	Monitoring body	Supervising Body
1.	<u>Desludging / Pit Emptying</u> 1.3. HH with single-pit toilets having access to desludging facility	• (No. of HH with single pits toilets having access to desludging facility /Total no.of HH with single pits toilets) x 100 • (No. of institutions, commercial establishments and other buildings with single pits toilets having access to desludging facility / Total no. of institutions, commercial establishments and other buildings with single pits toilets) x 100	% %	100% 100%	GP or service provider	Block SBM cell	District PHED/SBM officials
	1.4. HH with septic tanks having access to desludging facility	• (No. of HH with septic tanks having access to desludging facility / total no. of HH with septic tanks) x 100 • (No. of institutions, commercial establishments and other buildings with septic tanks	%	100% 100%	GP or service provider	Block SBM cell	District PHED/ SBM officials

		having access to desludging facility / total no. of institutions, commercial establishments and other buildings with septic tanks) x 100					
2.	**Transportation** Availability of facility for safe transportation of septage	Whether there is availability of facility for safe transportation of septage in the village ?		Yes	GP or service provider	Block SBM provider	District PHED / SBM officials
3.	**Treatment** 3.1 Septic tanks connected to soak pits 3.2. Scientific end treatment of the septage / slurry	No. of septic tanks connected to soak pit/total no. of septic tanks The waste material from septic tanks should not be disposed in the surrounding or into any water bodies. The collected waste needs further treatment	% %	100% 100%	GP or service provider GP or service provider	Block SBM cell Block SBM cell	District PHED / SBM official District PHED / SBMT officials

Local employment potential

The HR requirement for management of water and sanitation services in general or wastewater management systems in particular within a Gram Panchayat is an indication of the employment generating potential. The water and sanitation services 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)

DAY – 2

Afternoon

Session – 9

Group Work

Session Outcome

Upon completion of this session, the participants shall:

1. Appraise the model service contract forms, and judge various provisions in the light of reality and practicability
2. Apply the knowledge gained during the training in order to formulate / customise a service contract agreement that will be suitable to the GP one comes from
3. 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

- Appraising the Service Contract Agreements
- 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)

DAY – 2

Afternoon

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 wastewater management system at GP / cluster of GPs
2. Value the importance of wastewater management at GP level, and develop ideas in order to support the need for engaging third party agencies for managing such facilities at GP level

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 services related to grey water and black water management. This is what is expected of this session.

Summing up: The trainer can sum up the discussion that the GP functionaries 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 agreed official procedure in a fair and transparent manner. In the context of a GP, the water and sanitation related services take huge effort, 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)

Annexure – 1

CONTRACT FOR COMPREHENSIVE LIQUID 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 liquid waste concerning the drainage network and treatment plant in -------- GP as per the scope of work provided below. The service provider / Contractor shall be responsible for cleaning of drains, all the routine operations, as well as general maintenance of the drainage network and treatment plant for the stipulated period of time as per the scope of work.

Information about the GP (demography, structure of the GP, drainage network details, details of treatment plant, etc.) 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-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 Panchayats1or 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 means both of them.

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. "Liquid Waste" includes wastewater generated from bathing, washing, general cleaning, laundry, as well as from community stand post, well, hand pumps etc. The term "Liquid Waste" when used in this contract will not include black water.

4. Scope of work

The scope of work covers the all the activities required for end to end operation and maintenance of liquid waste management within the ------ GP as defined below.

The Contractor shall be responsible for regular cleaning of the drains, its minor repairs, operation and maintenance of the treatment units, including the availability of all the tools, spares, consumables, skilled and unskilled labour as per the required qualifications for the functioning of the liquid waste collection system and treatment plant. The Contractor shall also be responsible for co-ordinating with service providers for special maintenance and agencies for non-potable use of treated effluent, as required.

Assumption

(There exists liquid waste (grey water) collection network within the GP. The houses are connected to the public collection network which is further connected to a functional treatment unit prior to its discharge in the environment. The houses that have individual soak pits are not considered here.)

The indicative task list for the Contractor is as provided below:

4.1 Collection Network

- Cleaning / de-siltation of all the drainagelines, chambers, manholes, etc. as per the schedule.
- Co-ordinating with the solid waste management facilities for disposal of the material collected during cleaning
- Carrying out minor repairs of the drainage lines like replacing broken sections, leakages in the lines and chambers, manhole covers, etc.
- Taking corrective measures at locations where frequent blockages are observed, if applicable. (e.g. installation of a screen at the upstream of section, any other possible intervention).
- Informing GP authorities for any major repair / replacement required.
- Checking the connections from toilets (black water), if any and informing the authorities accordingly for further action like disconnecting it from network.
- Periodically checking if the house drains are connected to an inspection chamber with a screen prior to connection to the public drains.
- Informing the GP if storm water line is connected to the drain pipe.

4.2 Treatment Units

(The treatment procedures and the hence the units vary depending on the treatment technology adapted. It is advisable that the O&M procedure for the plant is drafted in consultation with the technology provider.)

- Operation of screens, etc. for removal of inorganic / unwanted materials like- plastic, grit, paper, etc. as per the schedules.
- Raking of screens in the screening chamber and disposal of screenings in environmentally responsible manner, if applicable.
- Operations of treatment units as per the schedule prescribed by the technology provider.
- Periodic collection of sludge and its treatment, as applicable.
- Maintaining conducive conditions in each unit as described by technology provider.
- Replacement/ replenishing of bio-media / culture as required.
- Routine cleaning of the filter beds, aeration tanks, sludge holding tanks etc., as applicable.
- Operation of disinfection unit, optimization of chemical dosage required as per the quality of incoming liquid.
- Routine testing of effluent parameters like Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), pH, Total Suspended Solids (TSS), Total Nitrogen (T-N) and Total Phosphorus (T-P), etc. prior to its

discharge. Taking corrective measures in case of it exceeds the permissible values.

- Contacting agencies / local farmers for use of treated effluent for non-potable purposes like irrigation.
- Servicing & overhauling of all the electromechanical devices (pumps, motor, blowers, light fittings, control panel, etc.) as per the schedule.
- Checking the efficiencies of all the electro mechanical devices and informing the authorities for any major repairs / replacements required.
- Checking all the civil structures for leakages, and taking corrective actions if required.
- Maintaining cleanliness and hygienic condition in the premises.
- Painting the interior and exterior of the units as per the schedule.

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.

5. Deliverables

- Clear and odour free drain / gutter in village at all points.
- Scientific and environmentally responsible treatment of the collected grey water.
- Monthly report containing-

1. Volume of liquid waste received at the treatment plant.
2. Volume of water treated.
3. Volume of water re-used for nonpotable purposes along with the details of the farmer, agency, etc. using treated water.
4. Details of maintenance activities undertaken for collection network cleaning lengths, sections replaced, screens installed, chamber / manhole covers replaced, etc.
5. Volume of sludge collected and details of the treatment provided.
6. Maintenance activities at the treatment plant.
7. Log of complaints received and its redressal measures.
8. Incoming and outgoing water quality parameters.
9. Details of new house connections, 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 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 / 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 / misconduct / theft / pilferage on the part of any personnel deployed by the Contractor, will result in fine or even termination of the contract.

6.2.7. 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 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. Equipment covered under this contract shall be totally attended to

by the Contractor including any trouble shooting to ensure smooth and trouble free operation.

6.2.10. The Contractor shall perform necessary minor repairs3 in the system and its components (if required). The Contractor shall bear all expenses for this purpose.

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

6.2.12. The Contractor shall maintain spares (whole and / or components) for all the vital equipment required for continuous operation of treatment plant.

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

Drainage lines

6.2.14. The Contractor shall ensure availability of personnel and appropriate vehicles [in required number] at the designated places for de-silting of drains chambers, manholes, etc., and collection of silt; and coordinate with appropriate solid waste management authority for its disposal.

6.2.15. Contractor shall have all the necessary cleaning equipment (in required number) during operation.

6.2.16. The Contractor shall ensure that no black water or other waste material enters the system during routine drain cleaning. The contractor shall inform GP authorities, in case of any issues regarding the same.

6.2.17. The Contractor shall report any illegal or unauthorized activity like discharge of black water in drain, discharge of solid waste in drainage line directly to GP.

Treatment plant

6.2.18. The Contractor shall ensure availability of personnel and appropriate vehicles [in required number] for raking of screens and collection of waste; and coordinate with appropriate solid waste management authority for its disposal.

6.2.19. Contractor shall have all the necessary cleaning equipment (in required number) during operation.

6.2.20. Contractor shall operate and maintain treatment plant as per the design and coordinate with the technology provider for any issues.

6.2.21. Contractor shall ensure that only grey water enters the treatment plant.

6.2.22. Contractor shall maintain inlet flow of grey water as per the design for better performance of plant.

6.2.23. Contractor shall take necessary steps to maintain effluent quality standards, if during monthly testing, the quality is found out to be degraded.

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 shall make proper safety arrangements like safety masks, gloves, sanitizers, etc. for the deployed personnel during cleaning of drainage lines and operation of treatment plant.

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 authorized 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. Contractor shall maintain effluent according standards decided by respective State pollution control board and / or CPCB.

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 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 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 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 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 all reasonable measures to minimize the consequences of any event of Force Majeure.

6.8. Indemnity

6.8.1. Any damage caused to any equipment / 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 / 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.

6.10. 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.

6.11. Rewards and penalties

6.11.1. The penalty amounts will be levied on 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 partys 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 (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 liquid 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 & 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.

9. Inspection procedure

9.1. Inspections of the Contractors work on cleaning of drains, O&M of drainage network and treatment of liquid waste can be done independently by a third party. The Contractors work is also liable for social audit by the community / VWSC.

9.2. The Contractor/ his representative shall provide necessary information / 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 to 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 drainage lines, electro-mechanical equipment (if any) and treatment plant, need for repairs / replacements, issue about consumer awareness, complaint redressals, 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/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 the 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. 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, refueling 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. Payments to the Contractor shall be made within ten (10) days of receipt of invoice of the services.

Annexure – 2

CONTRACT FOR OPERATION AND MAINTENANCE OF FAECAL SLUDGE TREATMENT PLANT 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 operate and maintain the faecal sludge treatment plant in ---------- GP. The service provider / Contractor shall be responsible for human resources, equipment, etc. for operation and maintenance of the faecal sludge treatment plant and the sale of the by-products for stipulated period of time as per the scope of work.

Information about the GP (demography, number of septic tanks in the GP, details of unit provided for sludge treatment, etc.) 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-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 Panchayats1or 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 means both of them;

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. “Containment unit” means a storage unit connected to the toilet drains, meant for holding faecal matter. The containment unit is designed to hold the excreta for prolonged time and allowed to pass excess water to underground strata. The units (septic tanks / single pit toilets) partially treat black water (water and excreta) that is generated and hence need to be de- sludged and treated safely.

3.13. “Faecal Sludge” means the waste accumulated in a septic tank or single pit toilet which is a raw or partially digested mixture mostly of excreta and water.

3.14. “Leachate” means the liquid separated from the faecal sludge which have considerable amount of organic matter (BOD) and requires treatment prior to disposal.

4. Scope of work

The scope of work covers operation and maintenance of the faecal sludge treatment plant at (mention the location of plant) in GP. The Contractor shall provide all the tools, spares, skilled and unskilled labour along with safety gear scientific and engineered treatment in environmentally responsible manner. Following is the indicative list of tasks to be undertaken by the Contractor for smooth functioning of the Faecal Sludge Treatment Plant.

4.3 End Treatment

(The treatment procedures, and hence the units, may vary depending on the treatment technology adopted. It is advisable that the O& M procedure for the plant is drafted in consultation with the technology provider.) The indicative O&M activities for few technologies are given below as examples. (Only the relevant activities shall be considered).

4.1.1 Screening

(Screening of the incoming material is generally carried out to ensure that materials like plastic, paper, glass, etc.do not enter the treatment unit)

- Operation of screens as per the schedule and requirement.
- Raking of screens and disposal of the collected material in environmentally responsible manner.
- Operation and maintenance of pumps, motors, etc. required for loading of screens, if any.

4.1.2 Technology specific O&M

4.1.2.1 Deep row entrenchment

- Digging of trenches of prescribed dimensions.
- Spreading of faecal sludge uniformly in the trenches and covering it with soil.
- Planting trees along the sides of the trenches.
- Maintaining sanitary conditions in the premises.
- Recording the volume of incoming sludge and calculation of trenches required; informing GP in case of issues with the availability of space in near future.

4.1.2.2 Unplanted / Planted Drying Bed

- Application of incoming faecal sludge uniformly (thickness of the layer not to exceed 20 cm) over the drying bed.
- Planting of specified species of plants for treatment, in case of planted drying beds.
- Relocating overgrown plants, as required.
- Collection and storage of the dried sludge after stipulated period.
- Periodic testing of contents of the by-products to ensure that there are no E-coli or other harmful bacteria. Undertaking corrective measures in case of any discrepancies.
- Collection and treatment of the leachate from the drying beds prior to disposal.
    - Operation of the treatment units for treatment of leachates, as applicable.

- Maintenance of all the components required for the treatment unit.
- Replacing / replenishing of filter media, bio-media, if applicable.
- De-sludging / de- siltation of stabilization ponds, if applicable.
- Disinfection of the treated effluent.
- Testing of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), pH, Total Suspended Solids (TSS), Total Nitrogen (T-N) and Total Phosphorus (T-P) and Faecal coliform etc. prior to discharge and maintaining its record. In case the parameters are not within permissible limits, undertaking corrective measures.

- Contacting agencies / farmers for use of compost and treated effluent generated as a result of the treatment.
- Periodic cleaning of the filter media (gravel and sand layer), clearing of under drain pipes used for collection of leachates.
- Operation and maintenance of all the electromechanical devices, if applicable.
- Maintaining sanitary conditions in the premises.

4.1.2.3 Treatments using Bio-methanation and bio-media

There are various technologies that use biological processes for effective stabilization of faecal sludge. These processes require specific treatment units, bio-media and special conditions to be maintained for the growth and activity of bio-media. A few examples of such processes are vermifiltration, bio-methanation/ anaerobic digestion, etc. It is advisable that the O&M procedure for the plant is drafted in consultation with the technology provider.

4.2 Grievance redressal

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

4.3 Record maintenance

- Volume of faecal sludge received at the plant.
- Volume of effluent treated and used, quantity of compost generated and sold, in case of drying beds.
- Details of land used, in case of deep row entrenchment.
- Test results for compost and effluent.

5. Deliverables

- Operation and maintenance of faecal sludge treatment plant as per the Standard operating procedures for converting faecal sludge into stable by-products.

- Monthly report including-
  - Volume of sludge received at the treatment plant.
  - Volume of treated effluent used and compost sold and stock available at hand.
  - Brief about performance of the treatment unit.
  - Complaints received and corrective measures taken.
  - Details of the vendors / farmers who are involved in trade of manure and treated effluent.
  - Submission of test reports, its analysis and the corrective measures taken for addressing of the issues, if applicable.

(Due considerations shall be given in the deliverables in case of natural calamities like drought, flood, earthquake, COVID19 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 Contractor shall preferably provide uniforms to all the deployed personnel with clear identity cards.

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 or 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 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.

6.2.8. Contractor shall ensure that there is no human contact with the raw faecal sludge, by abiding the rules under The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013, as amended from time to time.

6.2.9. The Contractor shall ensure availability of personnel and appropriate vehicles [in required number] for disposal of screenings and coordinate with appropriate solid waste management authority for its disposal.

6.2.10.The Contractor shall ensure that the treatment unit and its vicinity are kept clean at all times.

6.2.11.The Contractor shall ensure that the faecal sludge is not spilled outside the trenches and keep the area clean at all times.

6.2.12.The Contractor shall ensure that the plant is operated as per the design.

6.2.13. The Contractor shall promptly coordinate with the technology expert for the plant, in case of any issues.

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

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

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

6.2.17. All the required tools and tackles, safety gears, material (gravel and sand of prescribed quality) etc. to ensure smooth and trouble free operation shall be provided by the Contractor.

6.2.18. 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 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. The Contractor shall ensure that the licenses / NOCs from the concerned department- PHED, Drainage department, etc. are obtained prior to the signing of contract.

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, boots, etc. for the deployed personnel during treatment of faecal sludge.

6.3.4. 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 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. For disposal of septage, the Authority will need to follow the standards set out in the Environment (Protection) Act, 1986, depending on the mode of disposal.

6.5.3. Reuse of treated sludge for agriculture application should comply with the standards notified for compost under US EPA / WHO guidelines and MSW Rules.

6.5.4. Contractor shall maintain effluent according standards decided by respective State pollution control board and / or CPCB / NGT.

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 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 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 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 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 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 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 / 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.

6.10. 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. In case Deep Row Entrenchment or similar technology is adopted for treatment of faecal sludge, the GP shall carry out periodic laboratory testing of the drinking water sources in the vicinity to ensure that there is no damage to the source due to percolation of leachates.

6.11. Rewards and penalties

6.11.1. The penalty amounts will be levied to the Contractor if the work is not done satisfactorily and timely 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 there of.

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 (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 operation and maintenance of faecal sludge treatment 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 & 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.

9. Inspection procedure

9.1. Inspections of the Contractors work on treatment of faecal sludge can be done independently by a third party. The Contractors work is also liable for social audit by the community / VWSC. In case of drinking water sources are affected due to treatment units, 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 / data to the community and will abide by the decisions taken during Gram Sabha.

9.3. A monthly 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 Contract. During the meeting, the Contractor shall flag the issues faced 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 / 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 is favour 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. Payments to the Contractor shall be made within ten (10) days of receipt of invoice of the services.

Annexure – 3

CONTRACT FOR SUPPLY OF SKILLED AND UNSKILLED HUMAN RESOURCES FOR LIQUID 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 purpose of the contract is to appoint a service provider for supply of skilled and unskilled human resources for liquid waste management in GP as per detailed scope of work defined below. The service provider / Contractor shall be responsible for supply of **human resources** as per requirement for cleaning of drains, routine operations, maintenance of drainage network, and operation and maintenance of treatment plant.

Information about the GP (demographics, area, drainage network details, and treatment plant details) 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 / 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 means both of them;

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. “Liquid Waste” includes wastewater generated from bathing, washing, general cleaning, laundry, as well as from community stand post, well, hand pumps etc. The term “Liquid Waste” when used in this contract will not include black water.

4. Scope of work

The contractor will provide ----- skilled personnel and ---------- unskilled personnel for regular cleaning of the drains, its minor repairs, operation of the end treatment units, etc. for managing liquid waste 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 terrain, length of drainage lines and technology adopted for treatment in the GP. A table of indicative HR requirement for different tasks in cleaning and maintenance of liquid waste management are given below.)

Personal	No. of required / nature of engagement	Educational Qualification	Experience	Job description
Labour for maintenance of collection network	------nos. Full time/ Part time	NA	Should be physically fit for cleaning the drains	• Cleaning and de-slitting the drains / gutters and ensuring its disposal in environmentally responsible manner. • Minor repairs like-replacement of small sections, chamber cover, fixing of leakages in the drainage lines, chambers, manholes, etc. • Maintaining a log of locations that encounter frequent blockages.
Technician at treatment unit	--- Nos. Full time / Part time	ITI trade of Mechanic	6 months operation and maintenance various waste water treatment technologies. Conversant minor repairs of components of treatment plant and electromechanical devices.	• Operation of screens, etc. for removal of inorganic/unwanted materials like-plastic, grit, paper, etc. as per the schedules. • Ranking of screens in the screening chamber and disposal of screenings in environmentally responsible manner, if applicable. • Operations of treatment units as per the schedule prescribed by the technology provider.

				• Periodic collection of sludge and its treatment, as applicable. • Maintaining conducive conditions in each unit as described by technology provider. • Replacement / replenishing of biomedia/ culture as required. • Routine cleaning of the filter beds, aeration tanks, sludge holding tanks, etc., as applicable. • Operation of disinfection unit, optimization of chemical dosage required as per the quality of incoming liquid. • Servicing & overhauling of all the electro-mechanical devices (pumps, motor, blowers, light fittings, control panel, etc.) as per the schedule. • Maintaining cleanliness and hygiene in the unit and its premises.
Security Guard	Full time	Literate (preferred) / Retd. Military man	1 year in security functions of infrastructure.	• Avoiding any illegal activities in the premises. • Avoid trespassing and vandalizing in the premises.

				• Informing concerned personnel if • any foul smell, leakage, overflows are observed in the treatment units. • Prevention of hampering and dumping of waste by public or cattle. • Maintaining a complaint register for recording date wise details of the complaint and a visitors register.
Supervisor	--- Nos. Part time / Full time	Graduate in Science stream	1 year in operation and maintenance of treatment plant and collection network. Conversant with the technologies adopted for grey water treatment.	• Informing GP authorities for any major repair / replacement required. • Undertaking special repairs in the locations that encounter frequent blockages in consultation with GP. • Periodically checking if the house drains are connected to an inspection chamber with a screen prior to connection to the public drains. • Routine testing of effluent parameters like Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand

				(COD), pH, Total Suspended Solids (TSS), Total Nitrogen (T-N) and Total Phosphorus (T-P), etc. prior to its discharge and maintaining its log. • Contacting agencies / local farmers for use of treated water for nonpotable purposes like irrigation. • Co-ordinating with technology providers in case there are any issues in functioning of the treatment unit. • Checking the efficiencies of all the electromechanical devices and informing the authorities for any major repairs / replacements required. • Checking if all the civil structures are watertight, taking corrective actions in consultation with GP. • Identification of cause of the complaint and its redressal. • Maintaining record of the volume of water received,

				water treated, water reused, stock of consumables, repairs undertaken, etc.
Plumber	On call as per requirement (within 24 hrs after requirement is raised)	ITI trade for plumber	1 year in plumbing services, especially sewage drains and sanitary fittings	• Carrying out the repair works in the collection network and treatment units as required.
Mason	On call as per requirement (within 24 hrs after requirement is raised)	Preferred ITI trade of mason / Sanitary Hardware	1 year in basic masonry works and water proofing	• Minor repairs in the civil structure. • Water proofing of the units, if required.
Electrician	On call as per requirement (within 24 hrs after requirement raised)	Diploma in electrical engineering / full time ITI course of electrician	2 years in electrical works, major repairs of electromechanical devices specially pumps, motors, etc.,	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.

5. Deliverables

Supply of skilled and unskilled personnel, without a break; as per the terms of the contract.

(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 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. The Contractor shall preferably provide uniforms to all the deployed personnel with clear identity cards.

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 as mutually agreed by 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 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 within 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 villagers.

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 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.

6.2.16. 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 person 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 equipments. 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 treatment plant / 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 during cleaning of drains, while working in treatment plants and all other routine operations and maintenance.

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 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

6.5.1. 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 Contractor are 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
5.3.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 between the parties.

6.7. Indemnity

6.7.1. Any damage caused to any equipment / 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.

6.8. 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, tools and tackles which are required for cleaning and maintenance of drains and O&M of treatment plant such as plumbers snake, 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 treatment plant and any other facilities.

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

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 (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 its 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 – 4

CONTRACT FOR COMPREHENSIVE FAECAL SLUDGE 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)_____

Introduction:

The contract aims at management, collection, transport and treatment of faecal sludge generated in --------- GP. The service provider / Contractor shall be responsible for human resource, equipment, vehicles, etc. for contactless de-sludging of septic tanks, transport of sludge to the treatment unit and its treatment in environmentally responsible manner for stipulated period of time as per the scope of work.

Information about the GP (demography, number of septic tanks in the GP, details of unit provided for sludge treatment, etc.) 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-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 Panchayats1or 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 means both of them;
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. “Containment unit” means a storage unit connected to the toilet drains, meant for holding faecal matter. The containment unit is designed to hold the excreta for prolonged time and allowed to pass excess water to underground strata. The units (septic tanks / single pit toilets) partially treat black water (water and excreta) that is generated and hence need to be de- sludged and treated safely.

3.13. “Faecal Sludge” means the waste accumulated in a septic tank or single pit toilet which is a raw or partially digested mixture mostly of excreta and water.

3.14. “Leachate” means the liquid separated from the faecal sludge which have considerable amount of organic matter (BOD) and requires treatment prior to disposal.

4. Scope of work

The scope of work covers de-sludging, transportation and treatment of the faecal sludge from the containment unit (Septic tank) of -----houses, public toilets and ------institutions in ----number of villages and --- habitations in GP.

The Contractor shall provide all the tools, spares, skilled and unskilled labour along with safety gear required for de-sludging of the containment units (septic

tanks, within the GP), safe transport of faecal sludge to the treatment unit and scientific and engineered treatment in environmentally responsible manner. Following is the indicative list of tasks to be undertaken by the Contractor for smooth functioning of the Faecal Sludge Management system.

4.1. Emptying of the Containment unit

- Building database for number of containment units in the GP, status of containment unit and scheduling a tentative date for its emptying.

- Emptying (de-sludging) of the containment unit using improved technology (vacuum truck, tractor mounted vacuum, tanker, etc.).

- Reinstating of containment unit cover and marking of tentative date for future emptying based on size and usage.

4.2. Transport

- Human contact-less transportation of faecal sludge to a nearest treatment unit without spillage.
- Complete emptying of the tanker / vessel into the holding tank in treatment unit.
- Maintenance and refueling of the vehicle.
- Thorough cleaning of the vehicle, at least once a week.
- Periodic maintenance of the vacuum pumps or any other equipment required for emptying of containment unit.
- Inspection and repairs for leakages in the hose, piping, tanker / vessel, etc. and taking corrective measures.

4.3. End Treatment

(The treatment procedures, and hence the units, may vary depending on the treatment technology adopted. It is advisable that the O&M procedure for the plant is drafted in consultation with the technology provider).

The indicative O&M activities for few technologies are given below as examples. (Only the relevant activities shall be considered).

4.3.1 Screening

(Screening of the incoming material is generally carried out to ensure that materials like plastic, paper, glass, etc.do not enter the treatment unit)

- Operation of screens as per the schedule and requirement.
- Raking of screens and disposal of the collected material in environmentally responsible manner.
- Operation and maintenance of pumps, motors, etc. required for loading of screens, if any.

4.3.2 Technology specific O&M

4.3.2.1 Deep row entrenchment

- Digging of trenches of prescribed dimensions.
- Spreading of faecal sludge uniformly in the trenches and covering it with soil.
- Planting trees along the sides of the trenches.
- Maintaining sanitary conditions in the premises.
- Recording the volume of incoming sludge and calculation of trenches required; informing GP in case of issues with the availability of space in near future.

4.3.2.2 Unplanted / Planted Drying Bed

- Application of incoming faecal sludge uniformly (thickness of the layer not to exceed 20 cm) over the drying bed.
- Planting of specified species3 of plants for treatment, in case of planted drying beds.
- Relocating overgrown plants, as required.
- Collection and storage of the dried sludge after stipulated period.
- Periodic testing of contents of the by-products to ensure that there are no E- coli or other harmful bacteria.
- Undertaking corrective measures in case of any discrepancies.
- Collection and treatment of the leachate from the drying beds prior to disposal

    - Operation of the treatment units for treatment of leachates, as applicable.
    - Maintenance of all the components required for the treatment unit.
    - Replacing / replenishing of filter media, bio-media, if applicable.

- De-sludging / de- siltation of stabilization ponds, if applicable.
- Disinfection of the treated effluent.
- Testing of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), pH, Total Suspended Solids (TSS), Total Nitrogen (T-N) and Total Phosphorus (T-P) and Faecal coliform etc. prior to discharge and maintaining its record. In case the parameters are not within permissible limits, undertaking corrective measures.

➢ Contacting agencies / farmers for use of compost and treated effluent generated as a result of the treatment.

➢ Periodic cleaning of the filter media (gravel and sand layer), clearing of under drain pipes used for collection of leachates.

➢ Operation and maintenance of all the electromechanical devices, if applicable.

➢ Maintaining sanitary conditions in the premises.

4.3.2.3 Treatments using Biomethanation and bio-media

There are various technologies that use biological processes for effective stabilization of faecal sludge. These processes require specific treatment units, bio- media and special conditions to be maintained for the growth and activity of bio- media. A few examples of such processes are vermifiltration, biomethanation/anaerobic digestion, etc. It is advisable that the O&M procedure for the plant is drafted in consultation with the technology provider.

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

- Number of requests for de-sludging.
- Details of containment units de-sludged.
- Volume of faecal sludge collected.
- Volume of effluent treated and used, quantity of compost generated and sold, in case of drying beds.
- Details of land used, in case of deep row entrenchment.
- Test results for compost and effluent.

5. Deliverables

- Emptying of containment units within 72hrs (3 days) after the request is raised and its immediate transport to the treatment unit.
- Monthly report including -
  - Number of requests received.
  - Details of containment units emptied.
  - Volume of sludge transported to the treatment facility.
  - Volume of treated effluent used and compost sold and stock available at hand.
  - Brief about performance of the treatment unit.
  - Complaints received and corrective measures taken.
  - Details of the vendors / farmers who are involved in trade of manure and treated effluent.

- Submission of test reports, its analysis and the corrective measures taken for addressing of the issues, if applicable.

  (Due considerations shall be given in the deliverables in case of natural calamities like drought, flood, earthquake, COVID19 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 Contractor shall preferably provide uniforms to all the deployed personnel with clear identity cards.

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 or 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 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.

Emptying (de-sludging) of containment unit

6.2.8. Contractor shall ensure that only mechanical de-sludging is done, by abiding the rules under The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013, as amended from time to time.

6.2.9. The Contractor shall coordinate with the respective households for deciding the time for de-sludging containment units.

6.2.10. The Contractor shall ensure that the containment unit and its surroundings are cleaned properly after emptying them.

6.2.11. The Contractor shall ensure that the cover of the containment unit is reinstated properly and isn't damaged leading to the containment unit being open partially or fully.

Transport of faecal sludge

6.2.12. The Contractor shall ensure that adequate personnel are deployed for transport of faecal sludge. He / she shall also ensure that his / her vehicles have adequate capacity to carry the projected faecal sludge quantity safely to the treatment site.

End Treatment

6.2.13. The Contractor shall ensure availability of personnel and appropriate vehicles [in required number for disposal of screenings and coordinate with appropriate solid waste management authority for its disposal.

6.2.14. The Contractor shall ensure that the treatment unit and its vicinity are kept clean at all times.

6.2.15. The Contractor shall ensure that the faecal sludge is not spilled outside the trenches and keep the area clean at all times.

6.2.16. The Contractor shall ensure that the plant is operated as per the design.

6.2.17. The Contractor shall promptly coordinate with the technology expert for the plant, in case of any issues.

Maintenance

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

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

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

6.2.21. All the required tools and tackles, safety gears, material (gravel and sand of prescribed quality) etc. to ensure smooth and trouble free operation shall be provided by the Contractor.

6.2.22. 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 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. The Contractor shall ensure that all the vehicles used under the contract

have proper licenses from respective RTO. The Contractor shall ensure that the licenses / NOCs from the concerned department- PHED, Drainage department, etc. are obtained prior to the signing of contract.

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, boots, etc. for the deployed personnel during collection, transport and treatment of faecal sludge.

6.3.4. The Contractor shall strictly monitor that no one comes in direct physical contact with the faecal sludge during its handling at any stage.

6.3.5. 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 authorized 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. For disposal of septage, the Authority will need to follow the standards set out in the Environment (Protection) Act, 1986, depending on the mode of disposal.

6.5.3. In case of collection, transport, treatment and disposal of septage in a sewage treatment facility, the treated sewage and sludge shall comply with relevant Minimal National Standards (MINAS) notified under Environment (Protection) Act, 1986.

6.5.4. Reuse of treated sludge for agriculture application should comply with the standards notified for compost under US EPA / WHO guidelines and MSW Rules.

6.5.5. Contractor shall maintain effluent according standards decided by respective State pollution control board and / or CPCB / NGT.

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 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 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 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 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 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 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 hall 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.

6.10. 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. In case Deep Row Entrenchment or similar technology is adopted for treatment of faecal sludge, the GP shall carry out periodic laboratory testing of the drinking water sources in the vicinity to ensure that there is no damage to the source due to percolation of leachates.

6.11. Rewards and Penalties.

6.11.1. The penalty amounts will be levied to the Contractor if the work is not done satisfactorily and timely 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 partys 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 (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 faecal sludge 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 & 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.

9. Inspection procedure

9.1. Inspections of the Contractors work on collection, transport, and treatment of faecal sludge can be done independently by a third party. The Contractors work is also liable for social audit by the community / VWSC. In case of drinking water sources are affected due to treatment units, 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 / data to the community and will abide by the decisions taken during Gram Sabha.

9.3. A monthly 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 Contract. During the meeting, the Contractor shall flag the issues faced 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/disclose it to a third party. Upon termination of this Contract, confidential information hall 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 is favour to any person in relation to the Contract.

12. Payment terms

12.1. The major repairs6 / replacements shall be borne by the GP, for which proper movement and processing of documents will be the responsibility of the Contractor.

12.2. The charges for emptying of the containment unit shall be borne by the owner of the respective facility / house / institution. The charges will be defined at GP level based on type of containment unit and the distance to the management site.

12.3. Recurring expenses (such as water, electricity, refueling of vehicles etc.) shall be borne by the Contractor.

12.4. 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.

12.5. Remaining 10% and the security deposit will be returned after six months from the date of completion of contract/ termination of contract.

12.6. Payments to the Contractor shall be made within ten (10) days of receipt of invoice of the services.

Annexure – 5

CONTRACT FOR OPERATION AND MAINTENANCE OF LIQUIDWASTE TREATMENT PLANTS 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 operation and maintenance of liquid waste treatment plant in ----- GP as per the scope of work provided below. The service provider / Contractor shall be responsible for all the routine operations, as well as general maintenance of the treatment plant for the stipulated period of time as per the scope of work.

Information about the GP (demography, structure of the GP, details of treatment plant, etc.) 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-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 Panchayats1 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 means both of them.

3.10. “Services” means the works to be performed by the Contractor pursuant to this contract for the purposes of the Operation and aintenance of the system.

3.11. “Third Party“ means any person or entity other than the Government, the GP and the Contractor.

3.12. “Liquid Waste” includes wastewater generated from bathing, washing, general cleaning, laundry, as well as from community stand post, well, hand pumps etc. The term “Liquid Waste” when used in this contract will not include black water.

4. Scope of work

The scope of work covers all the activities required for operation and maintenance of liquid waste management within the GP as defined below. The Contractor shall be responsible for operation and maintenance of the treatment units, including availability of all tools, spares, consumables, skilled and unskilled labour as per the required qualifications for the smooth functioning of liquid waste treatment plant. The Contractor shall also be responsible for co-ordinating with service providers for special maintenance and agencies for non-potable use of treated effluent, as required.

The indicative task list for the Contractor is provided below.

(The treatment procedures and the units will vary depending on the treatment technology adapted. It is advisable that the O&M procedure for the plant is drafted in consultation with the technology provider.)

4.1. O&M of treatment units

- Operation of screens, etc. for removal of inorganic / unwanted materials like- plastic, grit, paper etc. as per the schedules.
- Maintaining conducive conditions in each unit as described by technology provider.
- Replacement/ replenishing of bio-media / culture as required.
- Routine cleaning of the filter beds, aeration tanks, sludge holding tanks etc., as applicable.
- Operation of disinfection unit, optimization of chemical dosage required as per the quality of incoming liquid.
- Routine testing of effluent parameters like Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), pH, Total Suspended Solids (TSS), Total Nitrogen (T-N) and Total Phosphorus
- (T-P), etc. prior to its discharge. Taking corrective measures in case of it exceeds the permissible values.
- Contacting agencies / local farmers for use of treated effluent for non-potable purposes like irrigation.
- Servicing & overhauling of all the electro-mechanical devices (pumps, motor, blowers, light fittings, control panel, etc.) as per the schedule.
- Checking the efficiencies of all the electromechanical devices and informing the authorities for any major repairs / replacements required.
- Checking all the civil structures for leakages, and taking corrective
- actions if required.
- Maintaining cleanliness and hygienic condition in the premises.
- Painting the interior and exterior of the units as per the schedule.

4.2 Grievance Redressal

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

5. Deliverables

- Scientific and environmentally responsible treatment of the collected grey water.

- Monthly report containing
  1. Volume of liquid waste received at the treatment plant.
  2. Volume of water treated.
  3. Volume of water re-used for non-potable purposes along with the details of the farmer, agency, etc. using treated water.
  4. Volume of sludge collected and details of the treatment provided.
  5. Maintenance activities at the treatment plant.

6. Log of complaints received and its redressal measures.
7. Incoming and outgoing water quality parameters.

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

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

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

6.2.12. The Contractor shall maintain spares (whole and / or components) for all the vital equipment required for continuous operation of treatment plant.

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

Treatment plant

6.2.14. The Contractor shall ensure availability of personnel and appropriate vehicles [in required number] for raking of screens and collection of waste; and coordinate with appropriate solid waste management authority for its disposal.

6.2.15. Contractor shall have all the necessary cleaning equipment (in required number) during operation.

6.2.16. Contractor shall operate and maintain treatment plant as per the design and coordinate with the technology provider for any issues.

6.2.17. Contractor shall ensure that only grey water enters the treatment plant.

6.2.18. Contractor shall maintain inlet flow of grey water as per the design for better performance of plant.

6.2.19. Contractor shall take necessary steps to maintain effluent quality standards, if during monthly testing, the quality is found out to be degraded.

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 shall make proper safety arrangements like safety masks, gloves, sanitizers, etc. for the deployed personnel during operation of treatment plant.

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 authorized 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. Contractor shall maintain effluent according standards decided by respective State pollution control board and/or CPCB.

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 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 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 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 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 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 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 / 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.

6.10. 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.

6.11. Rewards and penalties

6.11.1. The penalty amounts will be levied on 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 (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 liquid 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 treatment plant 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.

9. Inspection procedure

9.1. Inspections of the Contractors work on treatment of liquid waste can be done independently by a third party. The Contractors work is also liable for social audit by the community / VWSC.

9.2. The Contractor / his representative shall provide necessary information / 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 to verify that the works are progressing normally and are executed in accordance with the Contract. The Contractor shall flag concerns regarding availability of electricity, electro-mechanical equipment (if any) and treatment plant, need for repairs / replacements, issue about consumer awareness, complaint redressals, 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 / 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 the 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 is favour to any person in relation to the Contract.

12. Payment terms

12.1. The major repairs4 / 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, refueling 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. Payments to the Contractor shall be made within ten (10) days of receipt of invoice of the services.

Annexure – 6

CONTRACT FOR COLLECTION AND TRANSPORT OF FAECAL SLUDGE 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 manage collection and transport of faecal sludge generated in ------GP. The service provider / Contractor shall be responsible for human contactless de-sludging of septic tanks and transport of sludge to the treatment unit in environmentally responsible manner in stipulated period of time as per the scope of work.

Information about the GP (demography, number of septic tanks in the GP etc.) will be added here.

5.3. 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-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 Panchayats1 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 means both of them;

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. “Containment unit” means a storage unit connected to the toilet drains, meant for holding faecal matter. The containment unit is designed to hold the excreta for prolonged time and allowed to pass excess water to underground strata. The units (septic tanks / single pit toilets) partially treat black water (water and excreta) that is generated and hence need to be de-sludged and treated safely.

3.13. “Faecal Sludge” means the waste accumulated in a septic tank or single pit toilet which is a raw or partially digested mixture mostly of excreta and water.

5.4. Scope of work

The scope of work covers de-sludging and transportation of faecal sludge from the containment units (Septic tanks) of ----- houses, -- -- public toilets and ------ institutions in ----number of villages and --- habitations in GP. The Contractor shall provide all the tools, spares, skilled and unskilled human resource along with safety gear required for de-sludging of the containment units (septic tanks) and safe transport of faecal sludge to the treatment unit. Following is the indicative list of tasks to be undertaken by
the Contractor –

4.1 Emptying of the Containment unit

- Building database for number of containment units in the GP, status of containment unit and scheduling a tentative date for its emptying.
- Emptying (de-sludging) of the containment unit using improved technology (vacuum truck, tractor mounted vacuum, tanker, etc.).
- Reinstating of containment unit cover and marking of tentative date for future emptying based on size and usage.

4.2 Transport

- Human contact-less transportation of faecal sludge to a nearest treatment unit without spillage.
- Complete emptying of the tanker / vessel into the holding tank in treatment unit.
- Maintenance and refuelling of the vehicle.
- Thorough cleaning of the vehicle, at least once a week.
- Periodic maintenance of the vacuum pumps or any other equipment required for emptying of containment unit.
- Inspection and repairs for leakages in the hose, piping, tanker / vessel, etc. and taking corrective measures.

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

- Number of requests for de-sludging.
- Details of containment units de-sludged.
- Volume of faecal sludge collected and transported to the treatment unit.

5. Deliverables

- Emptying of containment units within 72hrs (3 days) after the request is raised and its immediate transport to the treatment unit.
- Monthly report including
    - Number of requests received.
    - Details of containment units emptied.
    - Volume of sludge transported to the treatment facility.
    - Complaints received and corrective measures taken.

(Due considerations shall be given in the deliverables in case of natural calamities like drought, flood, earthquake, COVID19 etc.)

6. Terms and Conditions

6.1. The Contractor expressly agrees that the decision of the GP regarding the contract 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. If the personnel as per the requirement are not deployed, then the Contractor will be liable for fine as decided by the GP.

6.2.4. 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 or 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 items which may be needed to fulfil its obligations under this contract.

6.2.8. Contractor shall ensure that only mechanical de-sludging is done, by abiding the rules under The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013, as amended from time to time.

6.2.9. The Contractor shall coordinate with the respective households for deciding the time for de-sludging pits.

6.2.10. The Contractor shall ensure that the containment unit and its surroundings are cleaned properly after emptying them.

6.2.11. The Contractor shall ensure that the cover of the containment unit is reinstated properly and isn't damaged leading to the containment unit being open partially or fully.

6.2.12. The Contractor shall ensure that adequate personnel are deployed for transport of faecal sludge. He / she shall also ensure that his / her vehicles have adequate capacity to carry the projected faecal sludge quantity safely to the treatment site.

6.2.13. All the required tools and tackles, safety gears, vehicles, etc. to ensure smooth and trouble free operation shall be provided and maintained by the Contractor.

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. The Contractor shall ensure that all the vehicles used under the contract have proper licenses from respective RTO. The Contractor shall ensure that the licenses / NOCs from the concerned department- PHED, Drainage department, etc. are obtained prior to the signing of contract.

6.3.2. The Contractor shall take official consent from the concerned authorities for emptying the faecal sludge in the treatment plant.

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

6.3.4. The Contractor should make proper safety arrangements like safety masks, gloves, sanitizers, boots, etc. for the deployed personnel during collection, and transport of faecal sludge.

6.3.5. The Contractor shall strictly monitor that no one comes in direct physical contact with the faecal sludge during its handling at any stage.

6.3.6. 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 authorized 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. For disposal of septage, the Authority will need to follow the standards set out in the Environment (Protection) Act, 1986, depending on the mode of disposal.

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 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 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 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 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 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 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 / 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.

6.10. 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.

6.11. Rewards and penalties

6.11.1. The penalty amounts will be levied to the Contractor if the work is not done satisfactorily and timely 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 (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 faecal sludge 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 & 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.

5.9. Inspection procedure

9.1. Inspections of the Contractors work on collection and transport of faecal sludge can be done independently by a third party. The Contractors work is also liable for social audit by the community / VWSC.

9.2. The Contractor/his representative shall provide necessary information / data to the community and will abide by the decisions taken during Gram Sabha.

9.3. A monthly 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 Contract. During the meeting, the Contractor shall flag the issues faced 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 / disclose it to a third party. Upon termination of this Contract, confidential information shall be returned to the GP.

10.2. 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.

10.3. 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.

10.4. 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. The charges for emptying of the containment unit shall be borne by the owner of the respective facility / house / institution. The charges will be defined at GP level based on type of containment unit and the distance to the management site.

12.2. Recurring expenses (such as refuelling of vehicles, maintenance of equipment etc.) shall be borne by the Contractor.

12.3. The security deposit will be returned after six months from the date of completion of contract / termination of contract.

Annexure – 7

CONTRACT FOR EMPTYING OF TOILET PITS 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 provide services for regular emptying of toilet pits in GP as per the scope of work provided below. The service provider / Contractor shall be responsible for checking the stability of waste in the toilet pits prior to emptying, emptying of pits, transporting the stabilized waste (manure) to a designated location for sun-drying, its storage and marketing.

Information about the GP (demographics, tentative percentage of houses having two pit latrines or similar units, their locations, etc.) 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-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 Panchayats1or 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 means both of them;

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. “Toilet pit” means the pits connected to the toilet for the discharge of feces and its containment till the feces is converted into stabilized waste which does not have any ill-effects on the surroundings when exposed and can be used as manure.

4. Scope of work

The scope of work covers emptying of toilet pits from ----- houses, public toilets and ------institutional toilets in ----- number of villages and ------ habitations in GP.

The Contractor shall provide all the tools and tackles, skilled and unskilled labour along with safety gear required for emptying of the toilet pit. The following tasks shall be undertaken by the Contractor, once the request for emptying of toilet pit is raised by the respective household / institution.

4.1 Emptying of Pit

- Inspection of waste in the pit to be emptied. The Contractor shall check the status of waste in the pit; it can only be emptied if the waste is stabilized.

- Emptying of pit, using adequate safety measures. It is advisable to undertake pit emptying activity in dry seasons.
- Cleaning of clogged cavities in the structure, so that water and / or gases are drained out from the pit.
- Scraping of the bottom of the pit to facilitate draining out of water from the waste.

4.2 Transport and storage of manure

- Transporting of manure.
- Loosening of lumps of the excavated manure and separating of materials like sticks, roots of trees, clothes, glass, etc. if found, with the help of sieving net.
- Sun drying3 for a period of six months.
- Storage of stabilised manure.
- Co-ordinating with the vendors / farmers for trade of manure.
- Periodic testing of the parameters in the manure.

5. Deliverables

- Emptying of toilet pits and transport of the stabilized waste for sun-drying without littering, within 24hrs after request is raised.
- Monthly report containing number of requests raised, number of toilet pits emptied, log of weight of manure collected from the pit, stored after sun- drying, quantity of manure sold, etc.

(Due considerations shall be given in the deliverables in case of natural calamities like drought, flood, earthquake, COVID19 etc.)

6. Terms and Conditions

6.1. The Contractor expressly agrees that the decision of the GP regarding this contract 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. If the personnel as per the requirement are not deployed, then the Contractor will be liable for fine as decided by the GP.

6.2.3. 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 or inconvenience to the villagers.

6.2.4. 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.

6.2.5. 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.

6.2.6. The Contractor shall, from time to time, procure and acquire all items which may be needed to fulfil its obligations under this contract.

6.2.7. The Contractor shall equip the workers with following equipment – Spade, Hoe, Sickle, Bucket, Shovel, Rake, Head pan (Ghamela), Digging bar, etc.

Collection of stabilized waste (manure)

6.2.8. The Contractor shall coordinate with the respective households for deciding the time for emptying pits.

6.2.9. The Contractor shall ensure that the pits and its surroundings are cleaned properly after emptying them.

6.2.10. The Contractor shall ensure that no damage is caused to the pit structure during emptying the pits.

6.2.11. The Contractor shall weigh the total manure (in kg) which is emptied from the pit, in presence of a member of the household. The Contractor shall keep a record of all such manure emptied for each household.

6.2.12. The contractor should take care about the foul gases shall not create the nuisance to the Owner or the people in the surroundings.

Transport of stabilized waste (manure)

6.2.13. The Contractor shall ensure that the vehicle used for transport of manure is in proper working condition; and the Contractor shall ensure that his personnel do not litter with the manure while transporting it to the location for sun-drying.

6.2.14. The Contractor shall periodically test the manure for its contents and ensure that there are no e-coli or other faecal matter remaining in the manure.

General Maintenance

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

6.3. 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. The Contractor shall ensure that all the vehicles used under the contract have proper licenses from respective RTO. The Contractor shall ensure that the licenses / NOCs from the concerned department- PHED, Drainage department, etc. are obtained prior to the signing of contract.

6.3.2. The Contractor should make proper safety arrangements like safety masks, gloves, sanitizers, boots, etc. for the deployed personnel during emptying of pits and transport of manure.

6.3.3. Medicines required for first aid shall be always kept in the stock.

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 authorized personnel and shall be solely responsible for liabilities arising out of it.

6.4.2. The Contractor will comply with the provisions mentioned in the laws for prohibition of Manual Scavenging. Ex,- The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act 2013, as amended from time to time.

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

6.4.4. The Contractor will make payment to the 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.

6.6. 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 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 6.11;

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.

By the Contractor

6.6.2. 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 (c) specified below-.

a. 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;
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 6.11.

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 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. Obligations of the employer

Assistance and Exemptions

6.9.1. 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

6.9.2. 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

6.9.3. 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.

6.10. Rewards and penalties

6.10.1. 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).

6.11. Dispute Resolution

Amicable Settlement

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 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 (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, equipment, safety gears, etc. that will be required for pit emptying shall be of standard specifications & wherever available should bear the B.I.S certification.

8.2. Use of manure for agriculture application should comply with the standards notified for compost under US EPA / WHO guidelines and MSW Rules.

9. Inspection procedure

9.1. The Contractor / his representative shall provide necessary information / data to the community and will abide by the decisions taken during Gram Sabha.

9.2. A monthly 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 Contract. The Contractor shall flag concerns regarding condition of pits, issue about consumer awareness, payment from households etc. during the meeting and will abide to the decisions taken during the meeting by the GP representatives.

9.3. 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 / disclose it to a third party. Upon termination of this Contract, confidential information shall be returned to the GP.

10.2. 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 concerning the work unless prior written permission has been obtained from the GP.

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. The GP shall decide a common rate for emptying of the pits in consultation with the Contractor and notify all households within its limits.

12.2. The GP shall decide a common rate in Rs. / kg for the amount of manure emptied from the pits, in consultation with the Contractor. In case, the household wants to sell the manure to the Contractor, the amount for total manure emptied shall be deducted from the amount for pit emptying. Each household shall pay the Contractor accordingly.

12.3. In case the household doesn’t want to sell the manure, it shall pay the full amount of pit emptying to the Contractor.

12.4. Payments to the Contractor shall be made on the spot, after completion of task.

12.5. The contractor shall give the receipt of the payment to the Owner and a copy of it shall be submitted to GP for information.

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.
7. Water Supply and Sanitation Service Level Benchmarks & Model Contracts for Gram Panchayats, MoPR, 2021.