Note on Faecal Sludge Management in Rural India

Graded Solution, legal and Regulatory implications and Possible Administrative Structure

SUBMITTED TO
Ministry of Drinking Water and Sanitation (MoDWS)

Arkaja Singh,
Fellow, Centre for Policy Research

Anindita Mukherjee,
Senior Researcher, Centre for Policy Research

SCI-FI SANITATION
SCALING CITY INSTITUTIONS FOR INDIA

CENTRE FOR POLICY RESEARCH

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Context Setting for Graded Intervention

As per Census 2011, India predominantly remained rural with 69% of its population living in these areas. However, for the first time, the absolute increase in population during the last decade (2001-2011) in rural areas was recorded to be less than that in the urban areas. This directs us to a changing trend where rural-urban migration is contributing less to the urbanisation process when compared to the in-situ urbanisation. Apart from the villages, there are about 3892 census towns (Census 2001 and 2011) that have rural administration. Census towns have been categorised as such based on three parameters – population is greater than 5000, population density is greater than 400 persons per sq. km. and 75 percent of male is occupied in non-agricultural sector.

Following the same pattern, a CPR study[1] highlights that there is a possibility for significant increase in the number of Census towns during 2021 Census with an addition of 3100 such towns. The CPR report[2] utilises the population and density parameters (and excludes the occupation parameter) and derives from previously existing literature on census towns to identify a larger roster of "Large and Dense Villages (LDVs)". A total of 158,948 units accounting for 42 percent of total population of India have been identified. The list includes already existing 3892 census towns and 155,056 other large and dense villages. The CTs make up for 54 million people which is 5 percent of total population of India. The other identified villages account for 453 million of rural population (54 percent of rural population and 37 percent of total population of India). Together the LDVs account for 507 million population and 42 percent of India's total population.

The interesting aspect is, within these rurally administered areas, there is an emulation of urban infrastructure preferences which are also manifested in the higher preference for on-site sanitation systems particularly septic tanks. The CPR analysis on the sanitation figures in census towns revealed that 46 percent HHs are dependent on septic tanks which is even more than that in statutory towns (37 percent). CPR compiled the research report with findings of a detailed study undertaken to explore trends in rural sanitation in India.

The report divulges instructive information on state-wise trends in the number of identified LDVs and their respective access to sanitation infrastructure.

High Septic Tank and Low Population Share of LDVs: Himachal Pradesh, Maharashtra, Uttarakhand, Andhra Pradesh, Punjab, Haryana	**High Septic Tank and High Population Share of LDVs:** Kerala
Low Septic Tanks and Low Population Share of LDVs: Madhya Pradesh, Gujarat, Karnataka, Rajasthan, Tamil Nadu, Odisha, Jharkhand, Chattisgarh	**Low Septic Tanks and High Population Share of LDVs:** West Bengal, Assam, Jammu & Kashmir, Uttar Pradesh, Bihar

Note: Low septic tank percentage is pegged at anything less than 30 per cent; anything higher than this is considered high septic tank percentage. Low LDV population share is anything less than 40 per cent of total state population

A comparative analysis has been made between sanitation infrastructure in census towns and other identified large and dense villages. It was found that there is a higher preference for on-site sanitation systems in these LDVs, more particularly for septic tanks which accounts for 46 percent of total sanitation facilities in CTs, 17 percent in villages and 21 percent in all LDVs respectively. A population size classification reveals the preference for septic tanks increase with increase in population size of LDVs. Besides discussing state-wise trends, the report also includes a spatial analysis which involves LDVs plotted on India map to check for clustering, vicinity to class I cities and to national highways. It was found that 13% of the CTs accounting for 13% of the total population are within 5 Kms. From Class I Cities. The same number for all LDVs is 2.5% accounting for 4% of total LDV population. 34% of CTs and 18% of all LDVs are found to be within 5-15 km from Class I cities. Further, 66% of the CTs and 40% of all LDVs were found to be with 5 km. from national Highways (NH).

There are far-reaching policy implications of this study which points at potentially benefitting strategic approaches to prioritise and augment sanitation infrastructure in these large and dense villages. A graded solutions with regard to clustering of these CTs and LDVs around urban areas already having disposal facilities, Clustering keeping in mind upcoming disposal and treatment facilities and stand-alone clustering to come up with small scale faecal sludge management solutions would make the strategy resource and time efficient.

It is further proposed by CPR to initiate a deeper socio-economic and spatial analysis of LDVs to understand the reasons for such preference for certain kinds of sanitation infrastructure, particularly septic tanks.

With Swachh Bharat Mission (G) aiming at providing every HH with sanitary household toilet facilities, it is expected that the quantum of HH containment systems in the rural areas are going to increase significantly. Given this, it would important to address the safe containment, management and disposal of liquid waste from toilets. There is also direct discharge of toilet waste into open drains, either directly from toilets lacking any on-site containment system, or from mal-functioning on-site containment systems. Most of the collected waste from on-site containment systems ('faecal sludge' or 'septage') and direct discharge is disposed off without proper treatment, or applied to agriculture and fisheries in ways that adversely affect human health, rivers and natural water bodies and the human environment. Unsafe management of faecal waste is also linked to the issue of manual scavenging, or manual handling of untreated faecal waste.

To mitigate negative impact on environment from unscientific disposal of toilet waste in the non-sewered areas, Faecal Sludge Management (or 'FSM') emerges as the imperative option. FSM is to ensure that liquid waste from human settlements is adequately contained, transported, and treated before final disposal or re-use. FSM as a process may be thought as three stages: (i) on-site containment in septic tanks or other containment structures, (ii) extraction or de-sludging and transport of faecal sludge, and (iii) treatment and disposal. Of these, the responsibility for on-site containment is conventionally thought of as being primarily with the household or owner of the premises, whereas there is a relatively greater role for local governments in de-sludging and treatment. These lines are however quite blurred: in practice de-sludging services are provided mainly by informal private service providers, who do not have any linkage with formal treatment facilities. Instead, the faecal sludge collected is either sold informally for agricultural use, or dumped on open lands and in water bodies creating huge environmental hazards resulting in negative health impacts.

To address these challenges, the crucial need for appropriate and adequate legal and regulatory provisions is gaining momentum.

The following section highlights sources of legal control and functional competence to bring about FSM in rural areas. Considering however that it is not starting on a clean slate, and that a range of practices relating to non-network sanitation exists, it would be important to examine whether the local governance institutions have the powers and competence to bring about FSM, or in other words, to transform existing sanitation practice into FSM.

Legal and Regulatory Aspects

1. Where is legal control and regulation required?

There are principally two aspects of legal control and regulation for FSM: the first is with respect to households and owners of premises, whose responsibility it is to manage on-site containment. To elaborate, this includes the responsibility not to make direct discharge of toilet waste into open drains or in the open, and to make an on-site containment structure for the same. This aspect of FSM also includes a responsibility to maintain the on-site containment structure, make timely arrangements for de-sludging, and to ensure that there is no manual scavenging.

The second aspect of this is the provision of de-sludging and transport services. This could be through improved control and management of private sector operators, who currently provide de-sludging services, and ensuring better integration with treatment facilities. In this regard, states need to consider ways to ensure, on the one hand, that de-sludging and transport services is available. While informal service providers currently serve many rural areas, these services may or may not be reaching all the settlements. On the other hand, it is also important to ensure standards of service provision, which include: provision of adequate equipment, enforcing the prohibition of manual scavenging and unsafe work on de-sludging operations, and to ensure that service providers decant septage only in treatment facilities. From the perspective of consumers, it is also important to ensure fair and affordable prices. There may however be some tension between these objectives, as introducing regulatory requirements and standards of service delivery may have the result of increasing the price at which these services are available to consumers. It would be the role of state policy to ensure a balance between these objectives.

There is also a significant role for the state in the provision of treatment facilities. Where urban treatment facilities treatment facilities are available within easy reach, state authorities could provide for a smooth interface for de-sludging service providers to de-cant their load in these facilities. However, rural areas have so far not developed their own treatment facilities, and there may be need for developing facilities specifically to serve rural areas, if urban facilities are too far away or not able to handle septage from neighbouring areas. There is a role for state and district authorities to support the development of operational models for small-scale rural treatment facilities, which could be run by public or private sector, and to provide for land and other clearances for these treatment facilities.

In addition, there are also situations where households may not be able to adequately handle the responsibility for on-site containment, such as in water-logged, flood-prone areas and in places close to water bodies. For such places, specific policies and interventions may be required, for which the local authority may need to carve out a special zone or category for intervention.[3]

Finally, there is also a need for a state-level mechanism to monitor the implementation of a time-bound implementation plan and to support inter-agency coordination. Given that there are presently no formal FSM arrangements in rural areas, formalizing, scaling up and setting up of de novo arrangements will require a multi-year commitment on the part of the state and implementing agencies. Creating a state-level mechanism to support and monitor implementation can help ensure that multi-year plans are appropriately funded and implemented.

A brief summary of the objectives of legal control and regulation is provided in Table 1 below:

Table 1

S. No.	FSM activity	Objectives of legal control and regulation	Who is involved?
1	On-site containment	· To prevent direct discharge or dumping of septage · Provision of on-site containment structure · Adequate maintenance and timely de-sludging · Ensure no manual scavenging on premises	Households and owners of premises Could require support from local authorities in areas where simple on-site containment is not feasible.
2	De-sludging operations	· Availability of services · Standards of service delivery · Fair and affordable pricing	Licensed private operators could provide services. Or these could be provided by local authorities. Local authorities to plan for service delivery, and to make licensing arrangements.
3.	Septage Transport	Ensuring that septage is de-canted only in treatment facilities	Licensed private operators, or local authority provided services.
4.	Treatment	Establishing new treatment facilities Supervision and monitoring of treatment systems Access policy for de-sludging vehicles	Treatment facility owners and operators could be private or public agencies.

2. Sources of power and functional competence

Broadly speaking, state governments have legislative and executive competence in matters relating to "public health and sanitation"[4]. In addition, "public health and sanitation" is also listed amongst the functions that states are encouraged to devolve to PRIs.[5] However, the management of liquid waste disposal in rural areas is not provided for in existing laws in most states. (In contrast, for urban areas, municipal laws and laws relating to water and sewerage boards do provide for some powers and responsibility relating to liquid waste disposal, although often these do not contain a very clear mandate for FSM.) We could however examine some of the existing laws under which regulations can be made for various aspects of FSM.

a. Environment laws

The environment laws include the Water (Prevention and Control of Pollution) Act, 1974 (the "Water Act") and the Environment (Protection) Act, 1986 (the "Environment Act"). Taken together, the implication of the environment laws is that: (1) discharge of any solid, liquid or other matter into water bodies and on land is restricted, and requires specific prior approval, and (2) depending on the type of discharge, and whether the discharge is on land or in water bodies, permissible standards are prescribed.

Logically speaking, the environment laws would imply that all households and establishments that do not have access to sewerage systems would have mandatorily have their own on-site containment or treatment systems. However, the environment laws do not clearly specify who their subject is, and whether the same standards are applicable to individuals and family units, and to institutions and multi-unit developments, and to municipal corporations and water boards. In reality, Pollution Control Boards do not have the administrative capacity to monitor and enforce standards on residential developments, and neither it is desirable to have undifferentiated standards for individuals, institutions and the state, when in reality, the costs for individual or private institutions to achieve environmental standards could be too high without access to public infrastructure.

In other words, it is not possible to correctly specify the level of individual responsibility for these environmental standards without first specifying the level of public responsibility, which in the case for FSM would be largely to ensure the provision of de-sludging services and treatment facilities. However, if a clear policy setting out the roles of state and local authorities in this respect can be made, it is possible to draw on the environment laws to mandate on-site containment and to make rules and regulations for the same.

Relevant provisions of the Water (Prevention and Control of Pollution) Act, 1974 and the Environment (Protection) Act, 1986

The Water Act restricts discharges into streams, water bodies or on land, and controls the creation of "new outlets" of discharge of sewage and effluents. Section 24 of the Water Act provides that "no person shall knowingly cause or permit any poisonous, noxious or polluting matter determined in accordance with such standards as may be laid down by the State Board to enter (whether directly or indirectly) into any stream or well or sewer or on land", and that "no person shall knowingly cause or permit to enter into any stream any other matter which may tend, either directly or in combination with similar matters, to impede the proper flow of the water of the stream in a manner leading or likely to lead to a substantial aggravation of pollution due to other causes or of its consequences."

Section 25 of the Water Act restricts all persons from setting up "any treatment and disposal system or an extension or addition thereto, which is likely to discharge sewage or trade effluent into a stream or well or sewer or on land (such discharge being hereafter in this section referred to as discharge of sewage)" and from bringing "into use any new or altered outlets for the discharge of sewage" and from making "any new discharge of sewage" without the prior consent of the State Board. The section further provides that for any existing points of discharge, an application for consent of the Board should be made in three months of the date of commencement of the Act.

The Water Act also provides for the establishment of the Central and State Pollution Control Boards (Sections 16 & 17), and lay down powers and functions of these boards. It is the responsibility of State Boards to give approvals and monitor compliance for discharge of effluents, and both State and Central Boards have power to give orders and directions, and to lay down standards for furthering the objectives of the Act.

The Environment Act supplements the provisions of the Water Act by providing a broad mandate for the Central Government to take measures to prevent and manage environmental pollution. Section 3 of the Environment Act gives the Central Government a wide-ranging powers to take all such measures and make any rules as it deems necessary for the protection and improvement of the environment and for preventing and controlling environmental pollution, in particular, the laying down of standards for the quality of environment and for the emission or discharge of environmental pollutants. Under Section 6 of the Environment Act, the Central Government is authorized to make rules in respect of all matters listed under Section 3, including in relation to the standards of quality of water for various areas and purposes, and the maximum allowable limits of concentration of various environmental pollutants for different areas. Section 25 of the Act provides that the Central Government may make rules for carrying out the purposes of the Act, in particular for the standards in excess of which environmental pollutants shall not be discharged or emitted. The Environment Act also expands the scope of the CPCB and the SPCBs established under the Water Act to cover other aspects of environmental pollution.

The Environment (Protection) Rules, 1986 (the "Environment Rules") issued by the Central Government under the Environment Act, provide standards for emission or discharge of domestic sewerage, with specific parameters depending on whether sewage is discharged into "inland surface water" "public sewers", "land for irrigation" or "marine coastal areas" (Refer Rule 3(3-A) and Schedule VI of the Environment Rules). It further specifies that the standards specified for discharge of effluents into the public sewer are applicable only if such sewer leads to secondary treatment including biological treatment system; otherwise, the discharge into sewers is to be treated as discharge into inland surface waters with specified standards as applicable under it. Schedule VI requires that, in considering applications for permitted discharges, the State Board take into account the assimilative impact of the discharge into water bodies, so that the quality of water for its intended use is not affected by the discharges.

b. Laws for the Prohibition and Elimination of Manual Scavenging

The Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993 (the 1993 Act) was supplemented by The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 (the 2013 Act). Taken together, the two laws prohibit various activities that involve manual handling of human excreta (defined as "manual scavenging"), and the lay down conditions and safety standards for activities defined as "hazardous cleaning".

In the 1993 Act, the term "manual scavenger" was defined as a person engaged in or employed for manually carrying human excreta, which in the context of the 1993 Act was usually taken to refer to the practice of carrying fresh excreta from dry latrines. The 1993 Act also prohibited construction and maintenance of dry latrines, and required the conversion of all dry latrines into water seal latrines.

The 2013 Act expanded the definition of "manual scavenger" to include "persons engaged for manually cleaning, carrying, disposing of, or otherwise handling in any manner, human excreta in an insanitary latrine or in an open drain or pit into which the human excreta from the insanitary latrines is disposed off (…) before the excreta fully decomposes in such manner as may be prescribed (…)". The 2013 Act also brought all "insanitary latrines" within its purview, which are defined as "a latrine that requires human excreta to be cleaned or otherwise handled manually, either in situ, or in an open drain or pit into which the excreta is discharged or flushed out, before the excreta fully decomposes in such manner as may be prescribed".

The 2013 Act requires the conversion of insanitary latrines into sanitary latrines within a period stipulated by the local authority. In the context of our present discussion, this could be taken as a requirement for all owners and occupiers of premises to provide a basic minimum of on-site containment systems for their toilets, which could be specified by directions of the government issued under the Act. It can also provide a sufficient mandate for notified local authorities to carry out a survey of toilets in its area of jurisdiction, and to monitor compliance with directions to provide for on-site containment systems.

Looking at the prohibition of manual scavenging activities, it is clear in both Acts that the responsibility for the act of manual scavenging, and its legal penalties would fall equally on the owner or occupier of the premises, any agencies or contractors involved, and on the local authority if is it is involved in commissioning or engaging people for carrying out manual scavenging. This principle would serve therefore for laying down (1) rules and conditions for households and other premises for maintaining on-site containment structures, as well as for (2) standard operating procedures and rules for service providers involved in de-sludging services.

In practice however, these provisions are very seldom invoked, except in case of dry latrines, and more recently in cases where manual scavenging results in the death of sanitation workers. There is a lot of confusion, and perhaps willful disregard, of the principles of these laws in the minds of implementing and enforcing agencies. For this reason, it is essential that if these provisions are to be invoked, first some clear directions need to be issued specifying what the acceptable standards and protocols for on-site containment systems are, and on the linkages with septage transport services and treatment facilities. Local authorities also need a clarification of their mandate, and guidance and support for the supervising and enforcing the prohibition of insanitary latrines.

c. Panchayati Raj Laws

In this section we will examine whether the Panchayati Raj Institutions (PRIs) have the powers and functional competence to take up various FSM related roles and functions.

In terms of the Constitutional allocation of powers and functions, the State Government has legislative and functional power over "public health and sanitation" (Article 246 and Article 162, read with the Seventh Schedule), and further, that these can be delegated to institutions of local self-government (Article 243G read with the Eleventh Schedule, or the "73rd Amendment").

By the 73rd Amendment, states are required to establish three tier Panchayati Raj Institutions (PRIs), including village level Gram Panchayats, intermediate level Taluka Panchayats, and district level Zila Panchayats. They are also required to endow them with such pow-

ers and functions as to enable them to function as institutions of local self-government. Following this, State-level laws across most Indian states provide for the establishment and powers and functions of the PRIs.

While states have wide latitude in terms of the actual powers and functions that are devolved to PRIs, over time some basic principles have been established. The Fourteenth Finance Commission (FFC) identified "core functions" of PRIs, which include "sanitation, solid waste management and drainage". In a CPR study carried out in 2014, it was found that most states had in fact devolved some sanitation related activities to PRIs[6], but that the legislative framework and devolution of real powers and functions was stronger in some states than in others.

Looking by way of illustration at the Karnataka Panchayat Raj Act, 1993, we found that village panchayats are assigned a number of FSM related functions, which include the general function of "providing sanitation and proper drainage" (Section 58), as well as the functions to prevent pollution of water sources and to take measures for the preservation of water sources. Village Panchayats also have specific powers to require owners of premises to make a covered cess pool on their properties (S. 100 and 104), to require owners to clean a cess pool or pit that is on their own property (S. 87). Schedule I provides for specific powers and duties in relation to "prevention, protection and control of water pollution", "establishment and maintenance of liquid waste management system" and "implementation of sanitation and waste management programmes at Gram Panchayat level". Furthermore, intermediate level panchyats, i.e., Taluka Panchayats have the specific responsibility of "acquiring land for locating manure pits away from the dwelling houses in the villages", and to assist Gram Panchayats by providing material support for the "maintenance of multi-village solid and liquid waste management plants" and "to provide technical support to Gram Panchayats" in matters relating to sanitation (Section 145 and Schedule II). At the top-most tier, District Panchayats have the responsibility for "consolidation of district sanitation plans", and for "providing essential support Taluka and Gram Panchayats" in relation to sanitation. District Panchayats also have the power to make "district policy and regulations", and to undertake regulation and evaluation" activities in relation to sanitation at the district level (Section 184 and Schedule III). District Panchayats also have general powers for "carrying out any work or measure likely to promote the health, safety, education, comfort, convenience" of the inhabitants of the district (Section 191).

Under the Karnataka law, PRIs have the power to make their own bye-laws, and the state government can also make regulations applicable to PRIs. The state government can also make model bye-laws that could be adopted by PRIs.

This gives us the idea that PRIs may already have the legal mandate to provide for most FSM related activities, and where this mandate is not specifically provided for in the current legal framework, it can be provided through specific devolution orders of the state government. Following this, PRIs could for example: (i) survey insanitary latrines, and monitor the setting up of on-site containment structures, (ii) carry out mandatory 'scheduled desludging', and monitor regular and periodic desludging, and (iii) enforce a licensing and monitoring regimen for septage transport services. PRIs could also make take up the responsibility of setting up treatment systems.

Depending on the scale at which these functions are optimally provided, responsibilities could be allocated at village, intermediate and district level. Further, certain functions may require support from engineering divisions of the state government, or coordination with urban local bodies. In order to establish the appropriate scale at this these functions could be carried out, and how this is to be brought about, it would be ideal to have a FSM specific 'activity mapping'.

3. Need for transforming and controlling existing sanitation practice

In considering the scope for transformation and control of existing sanitation practice, we need to consider whether there is adequate legal provision for: (1) on-site containment, and (2) septage transport services.

It would appear from our review of laws in the previous section that there is adequate legal power in the hands of the state government to mandate and enforce on-site containment under existing laws, but that specific rules and regulations need to be issued in order for

these powers to be made effective. Moreover, PRIs have a clear mandate to provide for sanitation, and could be entrusted with the task of monitoring on-site sanitation, although this too requires specific directions and regulations to be issued.

On the subject of on-site sanitation however, it is important for any policy to also carve out space for exceptional circumstances, in which regular on-site containment systems are not feasible, and in such cases to provide for specific public interventions to support local area sanitation. Without the possibility of notifying zones of exception, it would be difficult for any authority to enforce the standard containment policy, even in areas where there are no special circumstances.

In contrast, septage transport services are relatively less straightforward in legal terms. PRIs have the mandate to provide for septage transport services as a part of their mandate to provide sanitation services, but can they prevent private operators who are not licensed by them from providing these services? And if they have no control over private operators, they would not be able to monitor service standards, or to ensure that septage is de-canted only in notified treatment facilities?

We understand that services are currently provided by informal operators, who have modified tractors or small trucks fitted with a pump and a septage tank. These operators tend to be quite small scale, and usually do not have any linkage with formal septage treatment facilities. As a result, they usually de-cant their load in nearby water bodies, in wastelands, and sometimes in farmers' fields. The vehicles are likely however to have some form of registration under the Motor Vehicles Act, 1988. In and off itself, it would be difficult for PRIs (or any local authority) to prevent vehicles not registered with it to provide septage services, without proper regulations in which the responsibility for providing septage transport services through its licensed vehicles is taken up by the authority.

In other words, in order to ensure that septage transport services are provided exclusively by licensed operators, there is need for a regulation that establishes and clarifies the role of the PRI or other local authority in providing for FSM, and to have licensing rules and regulations in addition to this broad regulation.

4.Summary

It would appear from this analysis that there are adequate provisions in existing legislation for FSM in rural areas. However, it is worth noting that we have referred here to largely unused provisions in the laws. These provisions could be unused for several reasons: we have lacked in social and political commitment to sanitation, and especially the management and disposal of human excreta. However, one possible reason for the utilization of these provisions is that they are too vague to be effectively enforced, and that institutions and enforcement agencies have had no specific mandate in relation to these provisions. There is therefore a pressing need for government orders, rules and regulations, and bye-laws to be made to empower the implementing and enforcing agencies. It is in this regard not enough for state and national government to provide guideline documents, but to add specific and enforceable substance to these unutilized legal provisions.

From a legal point of view, we also need to consider and calibrate the role of statements of policy and intent, regulations, bye-laws and government orders. Rules and regulations, bye-laws and government orders draw authority from law, and give state and local implementing agencies the power to undertake certain actions. Rules and regulations, bye-laws and orders cannot create powers that do not already exist, but they can meaningfully expand the effectiveness of legal powers by providing detail and content to these powers. Policy statements are also useful but have a somewhat different role: they can help administrators use discretionary powers, but do not have any binding force on their own. Given how undefined the issue is for rural areas at present, it would perhaps be helpful to have a combination of a state policy statement, along with the necessary rules and regulations, bye-laws and orders.

Based on our analysis, we present in Table 2 the type of legal support and interventions that may be required to support the establishment of FSM in rural areas. This is however presented here to elicit discussion, and may not be seen as the final statement on the matter. There are indeed many approaches possible, and state-level preferences in this regard could vary considerably.

Table 2

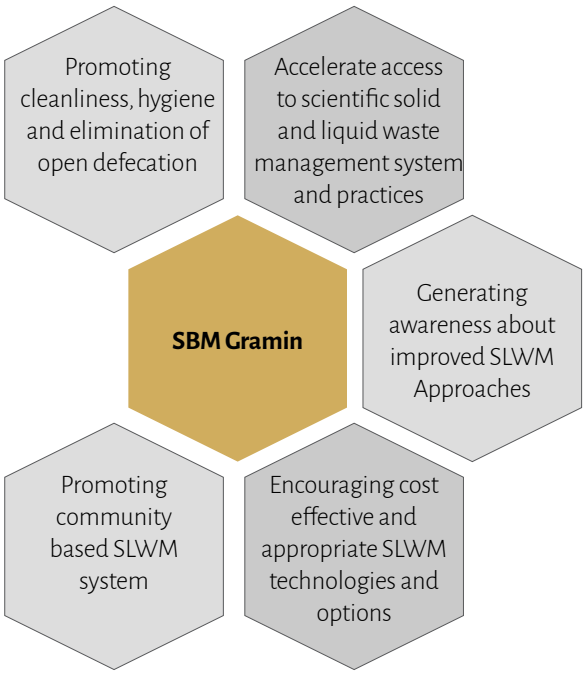
FSM activity	Objectives of legal control and regulation	Who is involved?	Type of legal intervention
On-site containment	· To prevent direct discharge or dumping of septage · Provision of on-site containment structure · Adequate maintenance and timely de-sludging · Ensure no manual scavenging on premises	. Households and owners of premises . Could require support from local authorities in areas where simple on-site containment is not feasible.	· Regulation or bye-law with technical standards for on-site containment drawing on manual scavenging laws and environment laws (including twin-pit, septic tank etc.) · Regulation for village panchayat to survey and monitor on-site containment and de-sludging · Specific provision to be made in the regulations for exceptional circumstances, in which standard on-site containment is not feasible
De-sludging and transport operations	· Availability of services · Standards of service delivery · Fair and affordable pricing	. Licensed private operators could provide services. Or these could be provided by local authorities. . Local authorities to plan for service delivery, and to make licensing arrangements.	· FSM regulation stating public health, environmental sanitation reasons why de-sludging and transport services can only be provided by licensed operators. · Licensing regulations, bidding process and conditions of license
Treatment	. Establishing new treatment facilities . Supervision and monitoring of treatment systems . Access policy for de-sludging vehicles	Treatment facility owners and operators could be private or public agencies.	· Allocation of functional responsibility for treatment to some state, local government agencies · Government order for district or state level coordination for shared treatment facilities

Administrative Provisions for Effective Implementation

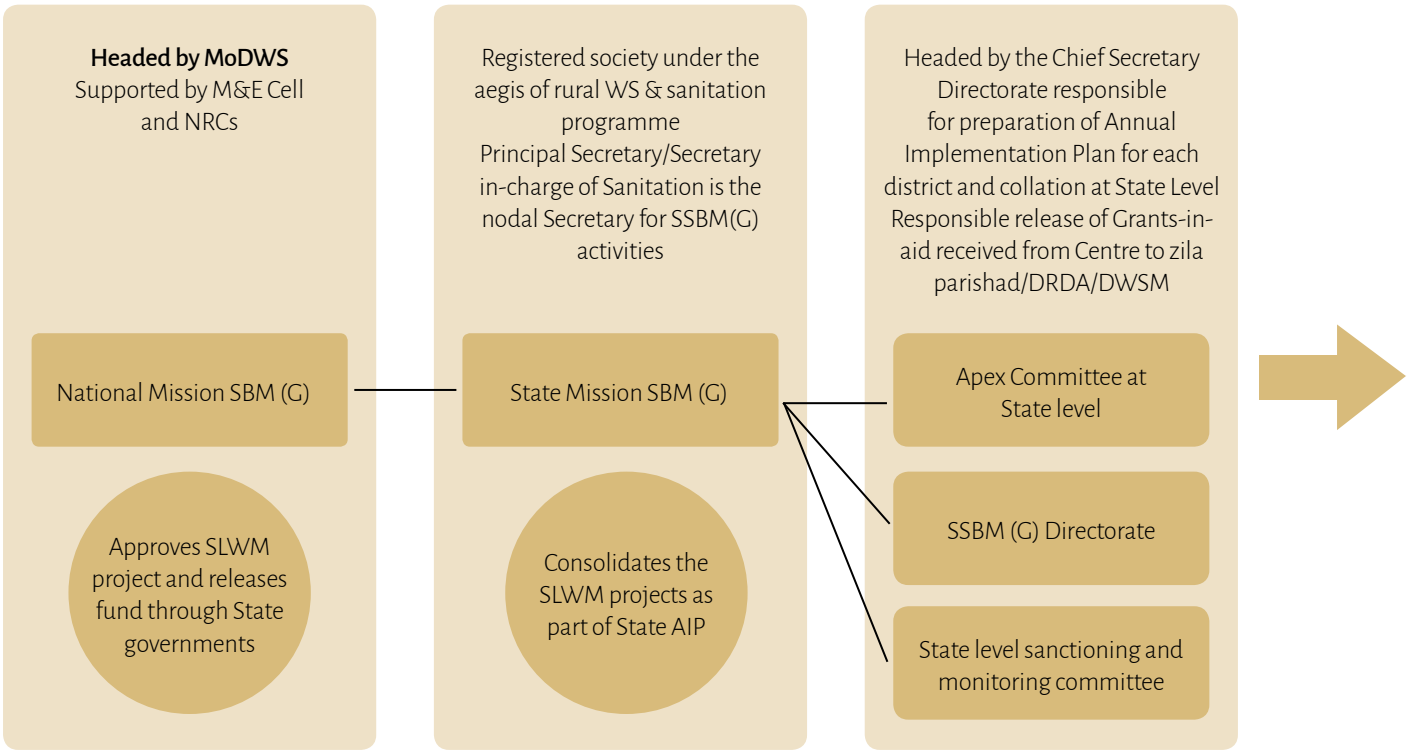
It would be important to assess the available provisions and administrative structures to empower and delegate responsibilities related to FSM. the Swachch Bharat Mission Gramin (SBM-G) Guidelines provides for the following with regard to management of solid and liquid waste:

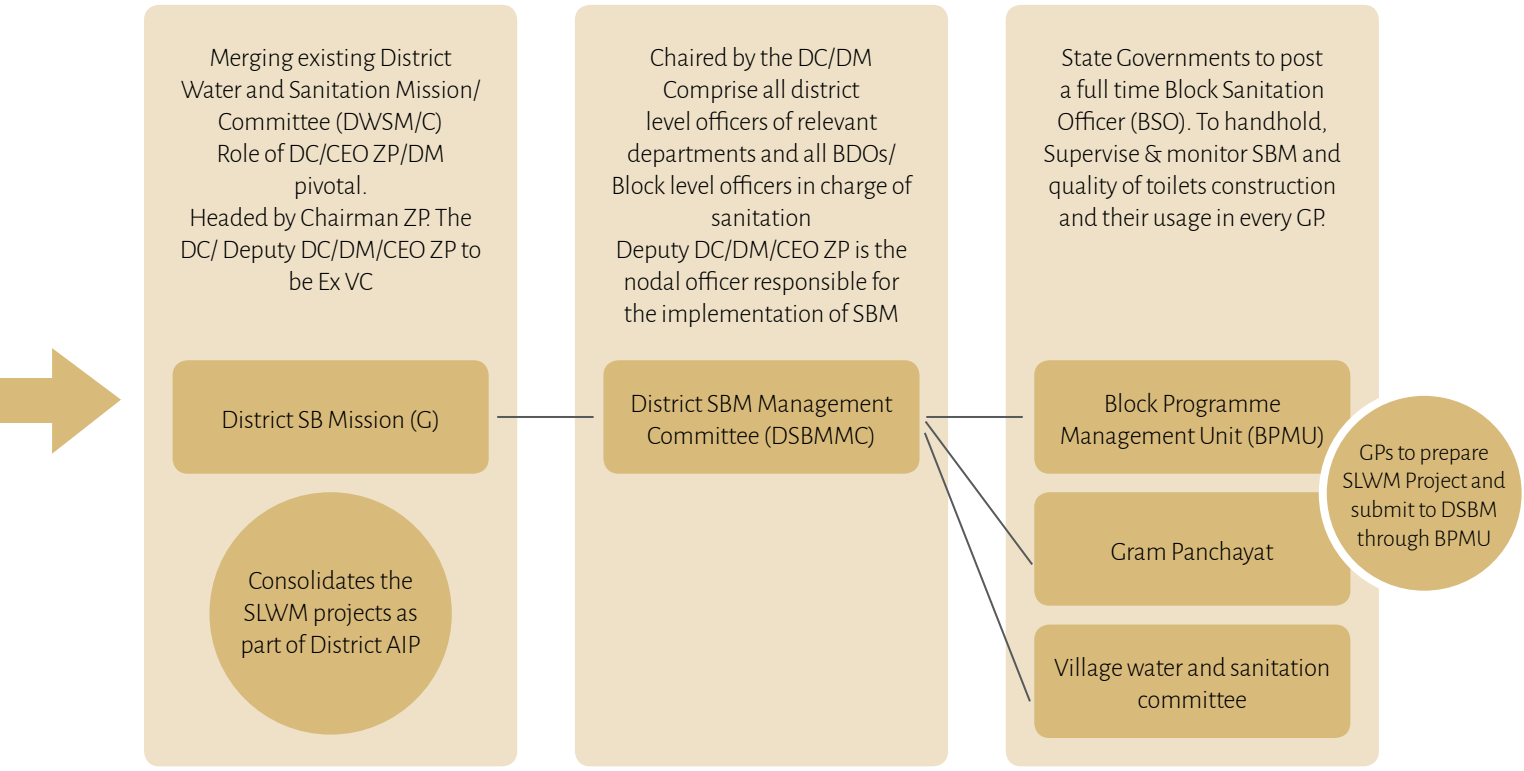
Within the already laid out structure as presented above, it is proposed to integrated Faecal Sludge and Septage Management (FSSM) aspects. This would call for strengthening focus on management of FSSM as part of SLWM, moving away or simplifying project based approvals for FSM projects and strengthening regulatory framework at all levels vis-à-vis FSSM system. Awareness generation around the need for FSSM and its impact on public health at large, and organisation of FSSM service providers would also be crucial. Further, the financial allocation requirements for uptake of FSM solutions by GPs should be re-looked at.

The implementation structure envisaged for SBM (G) also provides for a four tier structure starting from the GP level to the National level. The structure is laid out as below:



SLWM Implementation structure -SBM(G)





In the overall available framework, it is proposed to rest the FSM Planning at the District level. For procurement and marketing support, a clustered approach may be adopted for effective FSSM service provisioning. At the Gram Pranchayat (GP) level, it is proposed to have the monitoring and awareness raising aspects for effective roll out of FSM in the rural areas. It is also proposed to prepare an integrated plan/assessment at the HH level for sanitation infrastructure and integrate the same with GPDPs.

It is envisioned, that the rural FSSM policy would be able to address the key questions emerging as:

- Mandating containment systems at the household level;
- Possibility to design graded solutions based on preferences for HH containment systems and possibility to be served by available urban treatment facilities;
- Laying down mechanisms to account for geo-physical and climatic variations within the state;
- Preparation of integrated district level plans providing for land to install FSSM facilities when the need arise;
- Focusing on cost recovery;
- Standardisation of O&M practices related to FSSM w.r.t.
  - Safety, health and dignity at time of desludging.
  - Treatment and disposal facilities.
  - Mandating periodicity of desludging.
- Legal and regulatory aspects e.g. licencing the service providers, record keeping and
- Effluent monitoring and **performance evaluation** of management installations.

END NOTE

1 Unacknowledged Urbanisation: The New census Towns of India accessible at www.cprindia.org/research/papers/unacknowledged-urbanisation-new-census-towns-india

2 "Towards a New Research and Policy Paradigm: An Analysis of the Sanitation Situation in Large Dense Villages" accessible at http://www.cprindia.org/research/reports/towards-new-research-and-policy-paradigm-analysis-sanitation-situation-large-dense

3 The following article provides an illustration of the type of context in which standard on-site containment systems were not effective. Ponnani Municipality in Kerala took a proactive decision to provide a new type of on-site containment system, with targeted financial support for BPL households that lived very close to a water body that was to be conserved. https://www.google.co.in/search?q=ponnani+septic+tanks&ie=utf-8&oe=utf-8&client=firefox-b-ab&gfe_rd=cr&dcr=0&ei=BQ50WtvhM4GGX5-rqOAM

4 Article 162 and 246 of the Constitution of India confer legislative and executive competence to the State Legislature and Executive respectively. "Public health and sanitation" is included in the State List in the Seventh Schedule.

5 Article 243G and the Eleventh Schedule (or the "73rd Amendment")

6 Rural Local Body Core Functions and Finances: A Study for the Fourteenth Finance Commission, Centre for Policy Research, 2014. Author: TR Raghunandan. Available at: http://www.accountabilityindia.in/paisa/study/download/1271

SCALING CITY INSTITUTIONS FOR INDIA: SANITATION (SCI-FI)

Sanitation programme at the Centre for Policy Research (CPR) is a multi-disciplinary research, outreach and policy support initiative. The programme seeks to improve the understanding of the reasons for poor sanitation, and to examine how these might be related to technology and service delivery models, institutions, governance and financial issues, and socio-economic dimensions. Based on research findings, it seeks to support national, state and city authorities develop policies and programmes for intervention with the goal of increasing access to inclusive, safe and sustainable sanitation. Initiated in 2013, the programme is primarily funded by the Bill and Melinda Gates Foundation (BMGF).

CENTRE FOR
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DHARMA MARG, CHANAKYAPURI, NEW DELHI 110021
WWW.CPRINDIA.ORG

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