



Government of Chhattisgarh

Policy for

FAECAL SLUDGE & SEPTAGE MANAGEMENT

CHHATTISGARH

2017

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1.1

Introduction

Chhattisgarh is urbanizing at an accelerated pace, as the urban population increased by 31.14% between 2001 and 2011 (on par with India's urban growth rate of 32.15%). As per Census 2011, around 23.24% (59.37 lakh people) of Chhattisgarh's total population lived in urban areas, and current growth trends indicate that this number is expected to grow exponentially in the upcoming years. The number of Urban Local Bodies (ULBs) increased from 75 in 2000, to 168 in 2015 with addition of 93 'new ULBs or a 124% increase'. It is incumbent on these ULBs to implement and manage urban services including safe sanitation, faecal sludge & septage management.

Further as per Census 2011, a mere 9.1% urban Households in Chhattisgarh were connected with a piped sewerage network. On the other hand, more than half the urban population (50.71%) relied on on-site sanitation systems such as Septic Tanks (48.6%), Pit latrines (1.15%) and other systems (0.95%) for collection of faecal sludge and wastewater. This clearly indicates that on-site sanitation far supersedes piped sewerage system and is the primary sanitation system in Chhattisgarh. Chhattisgarh has an ambitious target of constructing 3.52 lakh toilets by 2017 in urban areas under SBM, and while it is expected to eliminate the unimproved practice of open defecation, it only addresses the first component of the sanitation value chain. The pertinent issue of proper collection, conveyance, treatment and disposal of the faecal sludge/septage is likely to remain.

Thus, given the limited coverage of piped sewer system, absence of sewage treatment facilities, and prominence of on-site sanitation as the primary sanitation system in urban areas faecal Sludge and Septage Management (FSSM) is expected to assume the central role in providing safe, hygienic and sustainable sanitation services in Chhattisgarh. Rightly so, FSSM has also been identified as a central challenge in achieving the vision of an 'Open Defecation Free' India and Chhattisgarh. In the spirit of the 'Draft National Policy on Urban Faecal Sludge and Septage Management (FSSM), 2016', this document on 'State Urban Faecal Sludge Management Policy for Chhattisgarh' identifies issues of safe sanitation in urban areas and provides an outline for establishing and effectively operationalizing FSSM at state and city level in Chhattisgarh.

1.2 Key Issues and Challenges

The road ahead for Chhattisgarh in operationalizing FSSM across the state will be a challenging one. It is estimated (based on Household and Housing data in Census, 2011), that around 15.9 lakh litres of faecal sludge is produced daily from septic tanks, public latrines and pit latrines alone, while almost 2.63 lakh litres of human waste is generated from open defecation. A further 2.61 lakh litres of faecal sludge (not including the 'wastewater') is generated from piped sewer system and service latrines, which is more often than not disposed in an unsafe manner.

The issues and challenges have been summarised under three broad categories:

1.2.1 Limited Awareness and Capacities

- Uniform lack of awareness and capacities for faecal sludge and seepage management in urban areas of Chhattisgarh, especially among the residents, service providers and the ULBs.
- Active participation and organization is missing among the residents - limited knowledge on FSSM practices, no community level monitoring of existing operations, untimely desludging of septic tanks by households, prevalence of undesirable toilet hygiene and usage, construction of on-site systems not at par with standards, etc.
- ULBs not properly introduced to planning for FSSM, technologies, standard procedures, management framework, manpower requirements, etc., and thus are unable to take necessary action/initiatives.
- Insufficient capacities and coordination between ULBs and State government. ULBs often lack capacities to mobilize resources (funds, manpower, expertise, equipment, etc.) on their own to deliver effective services, while the transfer of resources from the state govt. to local govt. becomes a tedious process.

1.2.2 Lack of Proper Planning, Design & Implementation of Sanitation Infrastructure

- Most stakeholders (such as various state government departments, ULBs, residents, desludging operators, service providers, etc.) are not up-to-date on latest developments in FSSM - modern technologies, standard construction techniques, operating procedures, safety & hygiene safeguards, etc.
- Toilet systems - such as septic tanks, single/twin pit pour flush latrines, etc. are not constructed as per design specifications - BIS and NBC, and thus there are frequent incidences of leaks, breakages, failures and contamination of soil, air and water.
- Desludging operators and service providers are not properly trained and do not use safety equipment during operations.
- Currently, there is a complete absence of any wastewater/seepage treatment facility in Chhattisgarh. Although new STPs are being proposed in a few towns under AMRUT other cities and smaller towns would require dedicated seepage and faecal sludge processing/treatment facilities for safe disposal or reuse.

1.2.3 Weak Institutional Framework

- Ambiguity in delineation of responsibilities and overlapping mandates among various government agencies at state and city level.
- Absence of dedicated service level benchmarks for FSSM.
- Limited availability of Standard Designs, Operating Procedures, Guidelines, Manuals, dedicated norms, etc. for city-wide FSSM to aid the ULBs for effective planning and implementation.
- Insufficient funds available for creating/ODM of city wide FSSM infrastructure. They are further unaware of various suitable service delivery mechanisms for financially viable operations.
- ULBs are not empowered to collect sanitation taxes, services charges etc. required to maintain a steady revenue stream and sustaining FSSM infrastructure.

1.3

Policy Vision

“ To ensure improved quality of life for the urban population, specially the vulnerable sections of the society, through sustainable Faecal Sludge and Septage Management services, by taking a holistic and participatory approach, while protecting precious environmental resources. ”

1.4

Policy Goals

The primary aim of this policy is to establish FSSM as a central component in delivery of safe sanitation service in Chhattisgarh by creating a favourable environment for its effective implementation across all urban areas in a pragmatic, sustainable and participatory manner. The Policy will strive for:

- **Ensuring timely collection & treatment**
Encouraging a shift towards scheduled desludging of septic tanks, pit latrines, etc. (periodically within 2 - 3 years) in all ULBs, while generating awareness and incentivizing households for the same. All collected faecal sludge should reach the treatment facility (without arbitrary and illegal disposal) and treated as per standards for safe disposal/reuse. Greater emphasis on technologies that consume very less power, use biological processes.
- **Ensuring optimum resource recovery**
The treatment facility would maximize reuse of treated wastewater and sludge for various public and commercial purposes. This will contribute in part towards cost recovery and even profit generation
- **Greater Awareness and Active Participation**
The residents would become active participants in the implementation and monitoring process, while all stakeholders would be sensitized and sufficiently made aware of the processes, procedures, components, etc. of FSSM. Multiple channels (digital, broadcast, print, physical, etc.) for communication, learning and stakeholder engagement would be used.
- **Creating an enabling institutional and regulatory framework**
The mandate, roles & responsibilities of all government departments and other stakeholders would be clearly defined and necessary steps taken for augmenting their capacities. Appropriate institutions, management & monitoring systems and standard procedures would be put in place at

state and city level that incrementally strengthen FSSM operations in urban areas. The institutional framework would also enable an environment conducive for greater participation of private

- **Innovation in service delivery and management**
Improving service delivery, management and monitoring by introducing technological interventions such as I.T. enabled single window system, GIS/ GPS aided planning and operations, custom MIS modules, etc. and greater emphasis on private participation in service delivery.
- **A strong partnership network**
Multi-sector partnership of government agencies/ULBs with other public/private organisations, groups and institutions for collaborating on knowledge improvement, funding, improved services, business opportunities, research & innovation, stakeholder engagement, peer learning, etc. Formal and informal platforms would be established for networking among various ULBs, service providers, associations, etc.

Expected outcomes

While the goals set out brood aspirations and intention of the policy, the expected outcomes are tangible end results if the goals are achieved.

- **Safe handling and complete containment of faecal sludge and septage** during collection, conveyance, treatment and disposal
- **Greater Progress in transition from reactive on-call service to periodic & scheduled service, along with formalization of service providers** (masons, operators, tankers, etc.)
- **Significant reduction in contamination of soil and water (surface and underground) due to human waste**
- **Noticeable improvement in public health indicators including morbidity and mortality rates across urban areas in the state - reduced incidences of water-borne diseases**
- **New opportunities and avenues emerges where sanitation and FSSM services emerge, based on cost recovery and profit generating business models**
- **Augmented capacities across institutions (State and city-level) that could possibly be replicated in other sectors**

1.5 Strategic Policy Actions

1.5.1 IEC & Stakeholder Engagement

A rigorous awareness campaign should be undertaken to educate various stakeholders about Faecal Sludge and Septage Management. ULBs can be tasked with spreading awareness among residents about govt. schemes, scheduled desludging, various incentives, good sanitation practices and monitoring of FSSM operations. This would be done with the involvement of ward councillors, community leaders, local registered groups, etc. State government can identify institutions and agencies to undertake awareness and communication operations at state and ULB level. Multiple channels may be used for the same - such as media (social, print, broadcast, etc.), advertising, flyers/ brochures/ booklets, workshops, road shows, rallies, announcements, meetings, etc.

1.5.2 Institutional and Regulatory Framework

A dedicated FSSM cell & committee can be set-up within UDD, Govt. of Chhattisgarh and further State-level FSSM rules and guidelines would be formulated that will include Standard operating procedures and training material for ULBs, Manuals for service providers, models drawings/Bid Documents, model Septage Management rules for ULBs, technological options, etc. All informal FSSM operations (by masons, desludging operators, cleaners, etc.) would be formalized via appropriate channels, such as licensing by ULBs, formal trainings, access to formal finance, etc. Roles of various stakeholders including State government departments, ULBs, residents, service providers and private sector partners shall be clearly defined for reducing ambiguities and overlap of functions.

1.5.3 Partnership Building

A strong network of partners in various sectors and of various backgrounds would be established, including renowned specialists/experts, Corporates, Research/Academic Institutions, Civil Societies/NGOs, private service providers, Donor agencies, Bilateral/Multilateral agencies, etc. for bolstering capacities and knowledge in the sector. There is an increased need to encourage greater private participation in service delivery and financing of FSSM activities by creating an enabling regulatory environment and creating opportunities.

1.5.4 Funding and Financing

New and innovative modalities for financing FSSM would be explored, which may include - PPP, CSR funds, Guarantee funds, Donor grants, WSPF, etc. Greater emphasis would be given to FSSM models that ensure Cost recovery and profit generation, especially through reuse of treated end product (wastewater and sludge). ULBs would be empowered to collect service charges, tipping fees, sanitation taxes, etc. in order to maintain a steady revenue stream for O&M of FSSM assets and services. Synergy would be ensured between funds and goals of various Central government programs such as AMRUT, SBM, Smart Cities, etc.

1.5.5 Implementation Support and Service Delivery

State government will play a facilitating role in implementing of FSSM at state and city level. Necessary support will be given to ULBs for timely preparation and implementation of city level FSSM plans, strategy and rules. A system of incentives and penalties may be devised to encourage greater participation among residents, compliance by service providers (heavy penalties for illegal waste disposal, while monetary incentives for disposal at designated site), and better performance of ULBs. Residents who get their septic tanks cleaned as per schedule or in a timely manner can be given a discount in the service charge/municipal taxes, while others would have to pay a higher amount for the same.

1.5.6 Monitoring and Evaluation

The state will evaluate FSSM operations at city level through dedicated service level benchmarks (such as San-Benchmark Framework suggested in Draft National FSSM Policy) for all ULBs. A performance based system of incentives and penalties may be devised for rewarding high performing ULBs and encouraging ULBs with poor performance to improve. Local Communities and Registered Groups would be involved in monitoring and compliance of FSSM operations, with encouragement by the ward councillors.

1.5.7 Capacity Building and Training

Capacity assessment should be carried out across state government departments and ULBs, and necessary measures to be taken to fill the gaps. External agencies would be engaged and proper modules would be prepared for training government officials, service providers, ULBs, etc. on relevant FSSM practices, technologies, operating procedures, techniques, financial assessment, etc.

1.6 Annexures

1.6.1 Regulatory Framework

The existing national and state level framework in terms of legislation, policy, programs, standards, guidelines, etc. has been presented below. This provides a brief background on the current regulatory regime, important considerations and priorities, setting a context for this policy.

Legislations	Brief
Environment (Protection) Act, 1986 and the Water (Prevention and Control of Pollution) Act, 1974	This Act applies in principle to every establishment, agency, or individual discharging any pollutant into the environment. 'Pollutant' includes treated or untreated sewage. It provides a framework for control of effluent, wastewater and sewage discharge.
74th Constitutional Amendment Act, 1992	Responsibility for the planning and delivery of urban services, including sanitation, lies with urban local bodies under local municipal laws and the 74th Constitutional Amendment Act, 1992.
Municipal Solid Waste (MSW) Rules, 2016	disposal and treatment of faecal sludge and septage, before or after processing, at landfills and for use as compost; and final and safe disposal of post-processed residual faecal sludge and septage to prevent contamination of ground water, surface water and ambient air.
The Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993	ban on dry latrines, i.e., latrines with no water-seal or flushing mechanism, and the employment of persons for manually carrying human excreta.
Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013	It intends to empower "District level survey committee" & "State level survey committee" towards the complete abolition of manual scavenging without certain obligations. "Hazardous cleaning" in relation to sewers and septic tanks is banned and that manual cleaning of sewers and septic tanks, if necessary, may be carried out only in very controlled situations, with adequate safety precautions, and in accordance with specific rules and protocols for the purpose.

Policy, Mission, Guidelines	Brief
National Urban Sanitation Policy, 2008	It intends to make all Indian cities and towns become totally sanitized, healthy and liveable and ensure and sustain good public health and environmental outcomes for all their citizens with a special focus on hygienic and affordable sanitation facilities for the urban poor and women.
Chhattisgarh Environment Policy	Encouraging optimal use and recycling of wastewater; Use of bio fertilizer for organic farming, generating fuel from biomass; Decentralizing the monitoring of environmental compliance by empowering local governments and communities.
Guidelines for Swachh Bharat Mission (Urban), 2014	It intends to eliminate open defecation, eradication of Manual Scavenging and to effect behavioural change regarding healthy sanitation practices in Urban areas.
National Mission on Sustainable Habitat (NMSH) (NMSH), 2010	National Mission on Sustainable Habitat (NMSH) is a component of the action plan for climate change, focus on waste recycling.
Atal Mission for Rejuvenation and Urban Transformation	Improving basic services (water supply, sewerage & septage, urban transport) in cities through reforms in urban governance, augmentation of basic infrastructure and establishing a sound institutional framework for effective delivery, through an incremental approach.

1.6.2 Role of Stakeholders.

Agency	Roles and Responsibilities
Urban Development Department	<ul style="list-style-type: none"> Overall supervision and coordination of FSSM operations in Chhattisgarh Formulating a roadmap for realisation of the State FSSM Policy
State Urban Development Agency	<ul style="list-style-type: none"> Nodal Agency for managing FSSM operations for Chhattisgarh Responsible for preparation of the State FSSM Guidelines, Standard Operating Procedures, User Manuals, Model FSSM rules for ULBs, drafting state acts and policies related to urban sanitation and FSSM, etc. Coordinating networking among various stakeholders Responsible for building partnerships
Chhattisgarh Environment Conservation Board	<ul style="list-style-type: none"> Provide NOC for Licensing of Densifying trucks and Location of treatment plants ~ Enforce compliance of the relevant environmental laws and rules during the collection, transport, treatment and disposal of faecal sludge and septage - through inspections, environmental monitoring, etc. Address grievance related to environmental hazards due to FSSM operations Assist in formulation of relevant advisories, guidelines, manuals, etc. to ensure environmental compliance for FSSM operations
Social Welfare Department	<ul style="list-style-type: none"> Ensuring compliance of provisions under the "The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013"
Other State Government Departments	<ul style="list-style-type: none"> Sufficiently incorporating the provision of this policy in their projects, schemes, programs, policies, plans, guideline activities, etc. Provide necessary sectoral inputs towards State FSSM strategy, rules, acts, guidelines, etc.

Standards, Manuals & Advisories	Brief
National Building Code of India (NBC) 1983 & 2005	Code governs the design, installation and maintenance of toilets, septic tanks, and sewers. It gives an overview of size of drainage, sewerage including design of septic tanks, sewers, toilets, and other sanitation devices. The NBC also suggests that use of septic tanks without follow-up treatment is not permitted
Manual on Sewerage and Sewage Treatment, CPHEEO in collaboration with IICA, 2013	Guidelines for - design, planning and providing advice on the selection of technology options for urban sanitation (for on-site, off-site sanitation and both decentralized & centralized treatment options), Operation and Maintenance of sanitation systems to resource mobilization; management, administration, project delivery, etc.
Advisory on Septage Management in Indian Cities, MoUD, 2013	Outlines the contents and steps of developing a septage management sub-plan (SMP) as a part of the city sanitation plans (CSP) being prepared and implemented by cities which supplement the NISP
Primer on Faecal Sludge and Septage Management, MoUD, 2016	Septage here refers not only faecal sludge from septic tanks but also from pit latrines and on-site toilets. Supplementary document to the Advisory on Septage Management in Indian Cities, 2013. Stresses the need for State-wide operative guidelines, City level toolkits, operational manual, management/ financing/ operating FSSM, and FSSM plan for the city.

The policy document tries to build upon the existing legislative, policy and regulatory framework, and amalgamates it into a single cohesive document, that would guide FSSM implementation in the urban areas of Chhattisgarh.

Agency	Roles and Responsibilities
Urban Local Bodies	<ul style="list-style-type: none"> Formulating city-wide FSSM strategy Timely preparation of city FSSM plan Notification of city wide FSSM regulations/operative guidelines to regulate all FSSM operations in the city Create an enabling environment for private sector participation in city-wide FSSM Ensuring overall O&M of FSSM operations in the city - involvement of private sector Creation of a City Sanitation Cell within all ULBs to oversee the FSSM related operations and management at city/ward level Licensing of all private desludging operators based on determined eligibility criteria Design an appropriate tariff structure to fund FSSM operations and its timely collection - service charges, sanitation tax, tipping fee from operators, etc. Ensuring financially and environmentally sustainable operations - reduce reliance on state and central government grants Incorporation of model septic tank design, location, zoning, effluent disposal standards, toilet design, etc. into building byelaws Develop training programmes for masons to build requisite skills in construction of quality septic tanks as per ISO norms Undertake awareness generation and behaviour change campaigns and regular public engagement to ensure active participation by the residents Devise a system of appropriate incentives and penalties for residents and service providers to ensure desirable behaviour Ensuring capacity building and training - manpower, financial, equipment, exposure visits, etc. Overall Monitoring and Evaluation of FSSM operations - benchmarking, ensuring compliance, performance monitoring of desludging operators, etc.
Households	<ul style="list-style-type: none"> Periodic cleaning and desludging of Septic Tanks as per Schedule Timely payment of service charge/sanitation tax/other fees, if any, towards FSSM services Regular maintenance and monitoring of septic tanks Timely collection of waste from households as per schedule and disposing waste at designated locations only Strict adherence to code of conduct/standard operating procedure as per city/state rules and guidelines Regular maintenance of equipment and vehicles Maintaining up-to-date logs, manifests and reports
Desludging Operators	<ul style="list-style-type: none"> Acquire requisite skills through training and capacity building to design and construct quality septic tanks as per ISO norms Active participation in service delivery of FSSM at state and city level
Service Providers - Masons, Designers	<ul style="list-style-type: none"> Providing financial assistance to desludging operators for purchasing new vehicles or upgrading existing equipment Extending low-interest loans to households for construction, repair of toilets and septic tanks Possible source of finances for creation of community or city level assets - community toilets, treatment plants, transfer stations, etc.
Private Sector	<ul style="list-style-type: none"> Integrate provision of FSSM Policy into the programs, projects and activities Undertake primary research to further safe and sustainable FSSM Develop models for safe and sustainable delivery of FSSM services to all Support implementation of FSSM activities at ground level Raise awareness and sensitization on the importance of FSSM among the general population Provide monitoring support to the ULB on any innovative practices that impact effective FSSM Set up regular interactions with the ULB to discuss operational issues and be part of the solution
Financial Institutions	<ul style="list-style-type: none"> Integrate provision of FSSM Policy into the programs, projects and activities Undertake primary research to further safe and sustainable FSSM Develop models for safe and sustainable delivery of FSSM services to all Support implementation of FSSM activities at ground level Raise awareness and sensitization on the importance of FSSM among the general population Provide monitoring support to the ULB on any innovative practices that impact effective FSSM Set up regular interactions with the ULB to discuss operational issues and be part of the solution
Multilateral, Bilateral and other International Institutions	<ul style="list-style-type: none"> Integrate provision of FSSM Policy into the programs, projects and activities Undertake primary research to further safe and sustainable FSSM Develop models for safe and sustainable delivery of FSSM services to all Support implementation of FSSM activities at ground level Raise awareness and sensitization on the importance of FSSM among the general population Provide monitoring support to the ULB on any innovative practices that impact effective FSSM Set up regular interactions with the ULB to discuss operational issues and be part of the solution
Academic, Research and Civil Society Organisations	<ul style="list-style-type: none"> Integrate provision of FSSM Policy into the programs, projects and activities Undertake primary research to further safe and sustainable FSSM Develop models for safe and sustainable delivery of FSSM services to all Support implementation of FSSM activities at ground level Raise awareness and sensitization on the importance of FSSM among the general population Provide monitoring support to the ULB on any innovative practices that impact effective FSSM Set up regular interactions with the ULB to discuss operational issues and be part of the solution
Ward Councillors	<ul style="list-style-type: none"> Lead the Ward-level awareness generation and behaviour change campaigns Inspection during construction of buildings to ensure compliance with bye-laws Encourage households towards scheduled desludging and active participation Represent ward-level/community level issues related to sanitation Assign a 'Swachhita Mitra' in every neighbourhood for community-scale monitoring