

# Promoting Faecal Sludge and Septage Management for Inclusive Urban Sanitation Services in India

## SUMMARY

This field note provides an overview of UNICEF's intervention in India to improve sanitation in urban and peri-urban areas through the promotion of faecal sludge and septage management (FSSM). The Swachh Bharat Mission Phase 1 played a crucial role in increasing access to toilets in urban areas; however, challenges remained in managing faecal sludge effectively. India has enacted several national policies on FSSM to mainstream it across urban areas, but the implementation at the state and urban local bodies level has been slow.

UNICEF collaborated with four state governments (Assam, Chhattisgarh, Jharkhand and Madhya Pradesh) to strengthen systems, capacity and the policy environment for FSSM. Specifically, the interventions covered the development of state-level FSSM policies, sustained advocacy for mobilizing resources for FSSM, behaviour change and communication campaigns, building institutional capacity for effective FSSM planning, implementation, and support in monitoring and documentation.

Lessons learned during the implementation of the Bill & Melinda Gates Foundation funded project include:

1. leveraging the unique advantage of UNICEF in the sector was crucial for mobilizing stakeholder engagement in strengthening the policy environment necessary for effective promotion of FSSM in the project states;
2. sustained advocacy at all levels is critical to increase awareness and upscaling the approach;
3. the revision of the policy framework for inclusion and equity provides crucial support to the ongoing efforts of promoting inclusive FSSM services;
4. community mobilization, particularly through women's empowerment collectives, along with strategic deployment of localized communication materials and ongoing capacity-building for both state and non-state actors, effectively enhances awareness of non-sewered sanitation.

This approach helps close the equity gap in safely managed sanitation in the project states.

## Introduction

The Government of India has sustained its political commitments for accelerated progress on sanitation through the national sanitation campaign, the 'Swachh Bharat Mission'. Over the years, the Swachh Bharat Mission has

transformed from simply ending open defecation to higher level of sanitation services including promotion of faecal sludge and septage management (FSSM) as part of the overall efforts of achieving the Sustainable Development Goal (SDG) 6.2 targets in India. The ongoing initiatives and increased focus on urban and peri-urban

areas align with UNICEF's sanitation agenda of accelerating progress on inclusive and sustainable safely managed sanitation services. The promotion of FSSM in India aligns with the strategic vision of the UNICEF Global Framework for urban WASH programme.

This Field Note presents the experience from UNICEF India's support to four state governments (Assam, Chhattisgarh, Jharkhand and Madhya Pradesh) in implementing FSSM in urban and peri-urban areas. The Field Note provides valuable lessons on strengthening systems, capacity and the policy environment at subnational level for provision of inclusive, safely managed sanitation services in urban areas.

### Understanding the context: Urban sanitation in India

Significant strides were made in urban areas of India under the Swachh Bharat Mission Phase 1 (2014–2019), particularly in increasing access to toilets. The 2011 Census revealed that 7.9 million households in 4,041 Indian towns lacked access to toilets, resulting in open defecation practices. The Swachh Bharat Mission responded by initiating the construction of individual and community toilets, setting a global precedent by emphasizing the need for improved sanitation for every household. Despite these advancements, the challenge of managing faecal sludge persisted and, consequently, faecal sludge from these areas often remains untreated.

Furthermore, the lack of faecal sludge treatment plants, weak regulation and enforcement by city authorities, and the presence of unlicensed and unmonitored operators compounded the issue of unsafe disposal of sludge into open fields, water bodies or drainage systems, resulting in environmental damage and public health concerns. The need for increased technical awareness among stakeholders, including government officials, consumers and service providers, regarding FSSM practices was also recognized as a major bottleneck for progress.

To tackle these challenges, India formulated a National Policy on FSSM in 2017, aiming to promote FSSM across urban areas of India. The

policy aimed to create an enabling environment, define the roles and responsibilities of stakeholders, and promote synergies among government programmes. It also focused on mitigating gender-based sanitation insecurity related to FSSM. The National Faecal Sludge and Septage Management (NFSSM) Alliance, established in 2016, collaborated closely with government bodies at all levels to integrate FSSM policy into the ecosystem. Since then, several states have initiated policies and allocated public funds for FSSM, with notable progress observed in the state of Odisha. Key milestones in Odisha include achieving 100 per cent access to safe sanitation, integrated citywide sanitation, sanitary and safe disposal, and awareness generation and behaviour change on FSSM.

In rural areas, the second phase of the Swachh Bharat Mission, running until March 2025, focuses on FSSM and aims to utilize urban facilities to manage faecal sludge from rural communities, facilitating urban–rural conversion for faecal sludge treatment services. In urban areas, the mission has achieved Open Defecation Free (ODF) status in numerous cities, with a strong emphasis on faecal sludge management and wastewater treatment.

UNICEF-India, with funding from the Bill & Melinda Gates Foundation, has been instrumental in supporting sanitation improvements in India, namely in urban areas of the four states of: Assam, Chhattisgarh, Jharkhand and Madhya Pradesh, which were lagging in their implementation of FSSM. The prevalent sanitation challenges, particularly in urban areas, identified in the four states were that majority of the households rely on on-site sanitation (OSS) facilities such as septic tanks but lack the necessary systems and infrastructure to ensure safely managed sanitation, leading to difficulties in desludging and proper waste treatment. Despite adopting FSSM policies in recent years, the implementation of these policies has been limited in these states.

UNICEF's collaboration with state governments in India is focused on developing and refining state-level FSSM policies and their implementation. This involved creating innovative solutions, improving sanitation systems, scaling up FSSM models, enhancing stakeholder capacities, launching localized communication campaigns, upgrading monitoring systems, and generating evidence to engage stakeholders effectively. These efforts aimed to significantly advance FSSM services, benefiting public health and the environment in these states.

### BOX 1: KEY POINTS

- *Despite significant progress in addressing sanitation challenges, particularly in urban areas, limited sewerage systems led to reliance on on-site sanitation (OSS) methods such as septic tanks. Further work is needed to achieve the SDG 6.2 goals of 'Safely managed sanitation', by improving faecal sludge and septage management (FSSM) (collection and treatment) in India.*
- *Several Indian states have adopted policies to address issues related to FSSM, though practical implementation of the policies varies significantly.*
- *UNICEF and the Bill & Melinda Gates Foundation are collaborating in India to strengthen FSSM systems and services in four states: Assam, Chhattisgarh, Jharkhand and Madhya Pradesh.*
- *The collaboration aims to support policy implementation, develop innovative FSSM solutions, and enhance sanitation practices for public health and environmental benefits.*

## Description of UNICEF intervention in India

While Citywide Inclusive Sanitation (CWIS) focuses more broadly on sewerage and non-sewered interventions, the focus of UNICEF's intervention was on non-sewered sanitation

(FSSM) as this was the priority area identified in the context of the states. The goal of the UNICEF-supported project is to create sustainable and inclusive FSSM systems in urban and peri-urban areas. The project focuses on four key result areas.

1. **Improved sector governance:** This involves enhancing governance systems for equitable FSSM resource allocation; strengthening service delivery at the national and state levels; establishing robust monitoring information systems and mechanisms to ensure transparent and accountable FSSM project performance.
2. **Enhanced faecal sludge treatment and management:** Increasing faecal sludge treatment volume by 25 per cent in targeted Urban Local Bodies (ULBs) within three years.
3. **Effective behaviour change and communication:** Rolling out state-wide information, education and communication (IEC) and behaviour change communication (BCC) campaigns for sustained ODF practices and FSSM adoption.
4. **Increased institutional capacity-building:** Strengthening the capacity of state departments, ULB officials and regional institutions for effective FSSM planning and implementation.

### Project activities and achievements

The key focus activities and results of the FSSM implementation in India are as follows.

#### 1. Improved sector governance

The project's primary objective is to drive state governments towards expanding efficient, sustainable and community-centric FSSM services in urban areas. Through policy

enhancements, standardized guidelines and effective monitoring, it aims to create a robust foundation for nationwide FSSM improvement, ultimately advancing sanitation services in these areas.

The project successfully established Technical Support Units (TSUs) with specialized consultants to support the project in each of the four target states. TSUs provide essential expertise in FSSM technology, capacity-building, and social and behaviour change communication (SBCC). The TSUs have actively supported state governments in FSSM improvements, organized workshops, and facilitated collaborations with external stakeholders at the national level.

UNICEF and the TSUs worked closely with state governments, reviewing and amending existing policies and strategies and developing policies in states where they were absent.

Recommendations were made to refine these policies with a particular focus on inclusivity, gender integration, and the engagement of women's self-help groups (SHGs) as one of the initiators for FSSM awareness at the grass-roots level. The resulting policies were more comprehensive, gender-sensitive, and in alignment with national guidelines, fortifying the framework for FSSM service delivery.

The project prioritized the adoption of state-level implementation frameworks and technical standard operating procedures (SOPs) for diverse FSSM activities. SOPs were produced for essential tasks, including sewer and septic tank cleaning, faecal sludge treatment plants (FSTP) operation, and wastewater management. The development and uptake of operational guidelines and SOPs streamlined the execution of FSSM activities, ensuring consistency and best practices.

Efficient monitoring is pivotal in scaling up FSSM. The project has committed to establishing robust monitoring and quality assurance systems. This has involved creating dashboards for tracking

## BOX 2: DEVELOPING FSSM POLICY FOR THE STATE OF ASSAM

In Assam, the FSSM subsector is in its early stages, offering UNICEF a unique chance to *establish it*. UNICEF launched a strategic campaign to educate state officials about FSSM, including exposure visits to advanced systems in Odisha and Telengana. Technical Support Units aided in policy assessment, resulting in Assam's FSSM policy to enhance FSSM practices statewide. The policy provides the state government with direction and guidelines to improve FSSM in Assam, focusing on areas including but not limited to the following.

- *Defining the scope according to the characteristics of urban settlements.*
- *Promoting awareness and building capacity through information, education and communication (IEC) activities.*
- *Designing, operating and maintaining containment systems.*
- *Establishing standard operating procedures for septage collection and conveyance.*
- *Ensuring the proper treatment and disposal of faecal sludge and septage.*
- *Facilitating resource recovery and reuse of wastewater and faecal sludge.*
- *Implementing gender-sensitive and inclusive approaches in sanitation.*
- *Providing options for financing FSSM plans.*
- *Clarifying roles and responsibilities of various stakeholders.*
- *Developing implementation plans for urban local bodies.*
- *Monitoring and evaluating progress.*
- *Aiming for expected long-term outcomes from the policy.*
- *Instituting municipal by-laws to govern FSSM systems and faecal sludge treatment plant functionality.*

*The Assam State FSSM policy is available [here](#).*

FSSM activities, conducting comprehensive assessments of ULBs, and developing harmonized FSSM monitoring frameworks. The implementation of monitoring systems and dashboards has enabled efficient data collection, analysis and decision-making at various levels.

In summary, under the Improved Sector Governance initiative, significant achievements have been made across the participating states in developing and disseminating comprehensive FSSM policies, establishing standardized SOPs, and implementing robust monitoring frameworks. Specifically, all four project states – Assam, Chhattisgarh, Jharkhand and Madhya Pradesh – have updated or introduced new FSSM policies that focus on inclusive and sustainable waste management practices. Each state has also produced detailed SOPs to guide the operational aspects of FSSM, enhancing both efficiency and compliance. Furthermore, these states have developed and deployed state-specific monitoring systems to ensure the ongoing effectiveness and improvement of FSSM operations.

## **2. Enhanced faecal sludge treatment and management**

Although there have been tremendous efforts undertaken by the national and state governments towards enhancing FSSM in India, several critical bottlenecks persist, namely around lack of capacities at the ULB level, inappropriate designs of FSTPs, lack of proper training and SOPs for staff to operate the treatment plants, lack of financing for operating the FSTPs, absence of clear effluent monitoring protocols with respect to FSTPs, and lack of robust and operational management systems. All these have led to the underutilization of the constructed FSTPs and created limited interest from the central Government to fund future FSTP construction.

The UNICEF-supported project has the objective of increasing the volume of faecal sludge treated and safely managed in the targeted ULBs. Efforts to increase faecal sludge treatment have included

improving the design and constructing septic tanks, connecting households to sewers, and piloting scheduled desludging. Innovative strategies such as private sector involvement in setting up and financing of FSTP operations and urban–rural convergence in selected areas emphasize the commitment to scaling up FSSM solutions.

To improve the overall understanding of the sanitation situation in ULBs, shit flow diagrams (SFDs), baseline surveys and assessments were conducted to determine the current and projected FSSM generation, service demands, and the required capacities of FSTPs. These assessments provide valuable data for planning and decision-making. In line with these efforts, comprehensive citywide sanitation plans have been developed for selected ULBs and are being implemented.

UNICEF’s ongoing efforts to bolster faecal sludge treatment across the four focus states revolves around retrofitting existing FSTPs with appropriate treatment trains, building capacities of ULBs to operate the plants, construction of new FSTPs with appropriate designs complete with SOPs, training, and capacity-building of ULB staff for operation and maintenance of the facilities.

Furthermore, existing FSTPs were assessed and retrofitted for improved performance – for example in Budhni and Pithampur ULBs in Madhya Pradesh, where existing FSTPs were poorly designed and operated. The central focus of the approach was to maximize the utilization of existing treatment capacity to improve operational efficiency of the treatment system and ensure safe treatment of faecal sludge and septage.

Additionally, to further increase the service area and increase operational capacity of the constructed/retrofitted FSTPs, UNICEF has embarked on extending the FSSM services to rural areas around urban settlements. This urban–rural convergence is unique and enhances sanitation service provision in rural areas using

the infrastructure in the urban settings, where traditionally the urban and rural sanitation subsectors were clearly separated, with distinct institutions, funding mechanisms, actors, etc.

Furthermore, UNICEF has advocated for co-treatment of faecal sludge and sewage, and municipal wastewater as per national FSSM policies and guidelines and for integrating the various domestic waste flows into a central treatment facility. Co-treatment involves retrofitting existing sewage treatment plants to enable them to accept and treat septage from septic tanks and soak-pits that are transported by cesspool emptiers along with sewage received directly through sewerage networks. Progress has been made in this, with some ULBs already implementing co-treatment practices.

In summary, the four Indian states are actively enhancing their FSSM infrastructure and strategies, showcasing significant development and expansion of FSTPs to cater for both urban and rural needs. Each state faced specific issues and challenges, and conceptualized and implemented innovative solutions accordingly. Chhattisgarh is conducting functionality assessments of FSTPs, with ongoing reviews and improvements in operational efficiency, while also pursuing an urban–rural convergence strategy and training key personnel to facilitate periodic desludging. In Assam, where no prior FSSM infrastructure existed, two newly commissioned FSTPs are currently operational with plans to establish 30 more. UNICEF is also partnering with

local tea garden communities to tailor FSSM solutions for the plantation workers. In Madhya Pradesh, UNICEF has retrofitted existing FSTPs and is arranging further constructions as per the sanitation plan, significantly increasing the number of FSTPs to cover more ULBs, particularly focusing on the urban poor. With support from UNICEF, the state of Jharkhand proposes to build 36 new FSTPs, reflecting an ambitious scale-up in FSSM facilities. Concurrently, these states are engaging the private sector to improve the sustainability and efficiency of FSSM services through initiatives such as drafting request for proposals for septic tank desludging, partnering with technology providers, and incentivizing private investment. This collaborative approach aims to leverage private sector expertise and resources to set up FSTPs, provide operational support, and enhance overall service delivery and infrastructure sustainability.

### **3. Effective behaviour change and communication**

The four focus states implemented comprehensive planning and execution of IEC and BCC campaigns, with the aim of creating awareness about FSSM issues at the state and ULB levels. These campaigns placed strong emphasis on promoting the design and construction of appropriate containment chambers and highlighting the detrimental effects of

inadequate containment systems. They also focused on educating residents about scheduled

#### **BOX 3: RETROFITTING AND EXPANDING TREATMENT FACILITIES IN BUDHNI AND PITHAMPUR URBAN LOCAL BODIES**

*UNICEF supported the assessment of the treatment efficiency of FSTPS in Budhni and Pithampur, discovering that neither of the treatment plants were functioning to desired treatment standards. Further investigations revealed that the designs of the two plants were inappropriate, and poor management of the plants rendered them ineffective.*

*The two plants were retrofitted with appropriate treatment processes, enhancing their capacity as per requirements. Additionally, the construction of a sewerage network and wastewater treatment plant in Budhni provides the opportunity to co-treat wastewater and faecal sludge in the same facility, maximizing the use of existing infrastructure.*

*Alongside the infrastructure enhancement, UNICEF supported capacity-building of the FSTP operators by providing them with standard operating procedures, training, guidelines and management plans, including educational videos on plant operation and maintenance.*

desludging, faecal sludge treatment, environmental risks associated with improper waste handling, and ensuring the safety and dignity of sanitation workers.

A draft IEC–BCC strategy and action plan was developed in Assam and submitted for review by all relevant stakeholders. Similarly, the state of Jharkhand is currently in the process of reviewing a costed SBCC plan. In Madhya Pradesh, SBCC plans were successfully implemented in two selected ULBs, while Chhattisgarh developed a FSSM BCC action plan, which is currently being implemented by ULBs. To support the implementation of BCC activities, financial resources have been allocated at the state or ULB levels. In Madhya Pradesh and Jharkhand, state-level budgets have been secured from the urban department for implementing IEC campaigns. In Chhattisgarh and Assam, ULBs have allocated budgets from their own resources to facilitate the implementation of BCC initiatives.

To effectively convey FSSM messages, a communication marketing strategy was adapted and localized. Existing SBCC content at the national and state levels was tailored to suit the specific requirements of each region. The ‘Malasur’ (*Mal* meaning faecal matter and *Asur* meaning demon) campaign, which was conceptualized around demonizing untreated faecal matter and its ill-effects on people, was promoted among communities, especially children.

In Madhya Pradesh, locally customized brochures were developed and distributed, reaching an estimated audience of 33,000 individuals. Chhattisgarh implemented wall paintings in ULBs as a visually impactful way to raise awareness. In Jharkhand, print materials such as posters and booklets were contextualized and translated. Additionally, a ‘Swachhata Rath’ (Cleanliness Chariot) was deployed to further amplify the messaging and engage the community.

#### BOX 4: SWACHHATA RATH (CLEANLINESS CHARIOT): Driving sanitation awareness in urban settings

*The Swachhata Rath is a mobile van designed to actively engage communities through its audiovisual tools and trained facilitators. The facilitators interact with the community, conducting sessions, plays and discussions, while the van shows videos highlighting safe sanitation practices, toilet use, waste disposal, and personal hygiene. Demonstrations of hand washing and toilet usage are provided, emphasizing their importance. The Swachhata Rath encourages community participation in sanitation initiatives, promotes behaviour change related to toilet usage and waste disposal, dispels sanitation myths and misconceptions, promotes hygiene practices such as hand washing, and adapts messages to the local culture. This versatile model of the Swachhata Rath can be replicated in different settings to effectively raise awareness about sanitation and serve as a powerful tool for behaviour change campaigns.*



Picture of Swachhata Rath  
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In summary, to enhance FSSM awareness and participation, the four Indian states have implemented significant outreach campaigns through partnerships with local support agencies. Madhya Pradesh engaged over 33,000 individuals and trained 582 Self Help Group (SHG) members, with communication support from WaterAid.

Jharkhand reached 20,000 people via awareness campaigns and rallies, facilitated by the local non-governmental organization (NGO) NEEDS.

Chhattisgarh conducted over 4,000 activities that impacted around 38,000 people, with NGO Samarthan leading the communication efforts. In Assam, outreach involved more than 34,000 people, primarily SHG members, with the Women Development Centre and the State Institute of Rural Development in Guwahati playing key roles.

#### 4. Increased institutional capacity-building for FSSM

UNICEF focused its efforts on supporting the development of comprehensive training plans to enhance capacity in FSSM at all levels. This involved collaborating with expert agencies such as the Administrative Staff College of India, National Institute of Urban Affairs, Centre for

Science and Environment, PriMove India and Urban Management Centre (infrastructure development and management consultants).

Institutional strengthening was extended to state-level entities, within both governmental and non-governmental organizations, ensuring sustained cross-sectoral capacity-building and technical support. Consultations were held with government departments including Urban Development Departments, State Urban Development Authorities (SUDAs) and municipal boards across the four states, as they represented a critical component of the project's exit strategy and for ensuring sustained capacities.

At the local level, a comprehensive range of training and capacity-building initiatives targeted diverse stakeholders engaged in sanitation service delivery. These initiatives covered topics

#### BOX 5: HOLISTIC CAPACITY-BUILDING FOR TRANSFORMING URBAN SANITATION IN MADHYA PRADESH

*Recognizing the need for sustainable urban sanitation solutions, UNICEF prioritized capacity-building in FSSM to reduce reliance on external aid and ensure long-term sustainability.*

*The approaches and activities included the following.*

##### 1. Technical training:

- Master trainers' development: A total of 45 engineers and functionaries were trained by the Administrative Staff College of India (ASCI) to become master trainers in FSSM, equipping them with the skills to train other local officials.
- Safety training for sewer workers: In collaboration with local authorities in Bhopal, Indore and Jabalpur, 54 sewer entry professionals underwent training on entry and rescue from sewers and utilities (ERSU), enhancing safety measures and operational protocols.
- Sanitation workers orientation: Approximately 776 sanitation workers received orientation on the safe cleaning of sewers and septic tanks, aimed at reducing health risks and improving sanitation practices.

2. *Exposure visits: A group of 40 state-level officials, including chief municipal officers (CMOs) and engineers, were taken on exposure visits to Maharashtra, Odisha and Telangana to observe and learn from best practices in FSSM implemented in these states.*

3. *Training on SBCC: About 200 National Urban Livelihoods Mission (NULM) supported Self-Help Groups (SHGs), 173 sanitation workers and 73 ULB functionaries across targeted ULBs were trained in various aspects of the FSSM service chain to ensure effective community engagement.*

##### 4. Management and operational training:

- Women SHGs empowerment: 52 women SHGs received training on FSSM relevance, credit financing, and engagement in local sanitation solutions, empowering them economically and socially.
- Training for desludging operators: 10 desludging operators were specifically trained on the standard operating procedures (SOPs) for septic tank cleaning and the operation and maintenance (O&M) of FSTPs to ensure high standards of service and operational efficiency.



such as desludging techniques, tendering processes, and suitable technology options for FSSM. Stakeholders at all levels gained the necessary skills and knowledge through capacity-building efforts, ensuring successful implementation of FSSM activities.

Local parastatals such as the State Institute of Panchayat and Rural Development (SIPRD) and local NGOs, such as NEEDS India, Samarthan, and Jal Seva Sansthan, played key roles in community engagement and assisting the ULBs. Their contributions significantly enhanced community outreach and capacity-building efforts, leading to the project's success.

Exposure visits to government officials in states with successful FSSM initiatives provided valuable insights and promoted knowledge-sharing, thereby accelerating project implementation.

Furthermore, at the national level, UNICEF supported the development of a national strategy for capacity-building, skill development and knowledge management for Swachh Bharat Mission Urban Phase 2. The strategy, launched in March 2022, is aligned with the project's expected results.

Under the Increased Institutional Capacity Building for FSSM initiative, the concerted efforts across the four states have yielded significant results. Over 70 major training sessions were conducted, empowering more than 1,500 individuals, including ULB representatives, city managers, engineers, SHG members, NGO representatives, and community members with vital skills for FSSM project planning and implementation. Eleven Technical Support Unit (TSU) members received specialized training on integrated wastewater and septage management, enhancing their project management capabilities. Additionally, extensive consultations and capacity-building exercises involved state-level entities, local parastatals and NGOs, ensuring broad-based institutional strengthening. These initiatives

were complemented by the development of national strategies and numerous exposure visits, facilitating knowledge transfer and best practices in FSSM. Collectively, these efforts have not only strengthened the capabilities and safety of those involved in FSSM but also bolstered the sustainability of these practices in the states.

More information on FSSM capacity-building efforts is available [here](#).

## Challenges in project implementation

**Resource constraints:** The project faced resource limitations that hindered comprehensive assessments and the collection of critical data for informed decision-making. Furthermore, securing sufficient funding for significant infrastructure projects and maintaining consistent implementation and coordination of co-treatment practices across various ULBs was a challenge. Similarly, obtaining dedicated budgets for BCC within the ULBs continues to be a significant concern and hinders the accelerated work on awareness creation.

**Policy and approval delays:** Timely approval of policies is crucial for the efficient implementation of FSSM initiatives. Delays in this regard hindered progress and required dedicated efforts to expedite legal and environmental clearances by constant follow-up with the state officials. Additionally, addressing community opposition and getting approvals on issues such as land allocation for construction of FSSM infrastructure presented a unique challenge. These conflicts demanded careful negotiation and consensus/confidence-building across many stakeholders.

**Local adoption and translation challenges:** Translating materials into local languages and contexts became complicated due to the diverse ethnic and sociocultural norms among different states. This often led to delays in launching the campaigns and navigating between cultural

acceptance and campaign effectiveness remained a challenge.

**Inclination of state and national authorities towards sewer systems:** There is an increasing tendency among national agencies to prioritize funding for large-scale conventional sewerage systems while reducing financial support for FSSM infrastructure in cities. This shift strains the financial resources of local governments in small to medium-sized towns where FSSM is the predominant sanitation system, impedes the commitment of ULBs to enhancing FSSM services for the urban poor and diminishes the efforts to scale up these initiatives.

## Lessons learned from FSSM Initiatives in India

**Leveraging UNICEF's unique advantage in the sector was crucial for mobilizing stakeholders' engagement in strengthening the policy environment and effective delivery of the FSSM project:**

UNICEF possesses a distinctive advantage in enhancing FSSM in the four targeted states, thanks to its active presence across multiple sectors in both urban and rural areas, at both national and state levels. This presence allows UNICEF to leverage its extensive experience in fostering cooperation among diverse stakeholders and to forge strategic partnerships among state and local governments, NGOs, research institutes, consultancies, the private sectors, and other partners. UNICEF's ability to engage with various actors, ranging from government bodies to local communities, facilitates collaborative efforts in planning and implementation of sanitation interventions.

**Sustained advocacy and awareness creation are required for inclusive FSSM services:** The subnational/regional advocacy with government agencies on policy, programmes and technology led to equity-oriented and inclusive policy outcomes. The targeted advocacy efforts led to integration of previously overlooked areas of gender inclusivity, urban poor, SHG engagement, sanitation workers' safety and dignity into subnational policies and inclusive planning at the

ULB level. This in turn led to involving and empowering marginalized groups, especially women SHGs, in sensitization campaigns, which has further enhanced community outreach and participation. UNICEF's efforts in increasing advocacy for FSSM and capacitating the ULBs has seen a marginal but steady increase in state funding for FSSM activities across the four states, especially in the areas of effective BCC campaigns and awareness-raising activities.

**A well-structured capacity-building mechanism is required for effective and sustainable delivery of FSSM services:**

The TSUs (comprised of external consultants) have been instrumental in providing focused and concerted technical assistance at the subnational level and down to the ULBs. The continuous support by TSUs, advocacy, effective training, and exposure visits to states with successful FSSM models, proved invaluable in building the capacities for FSSM among different actors. This led to customized strategies for ULBs that address unique needs and challenges of their cities effectively. The TSU structure has many advantages as a quick-fix solution where capacities are lagging; institutionalizing this within subnational agencies can prove instrumental in upscaling FSSM in other states. Effective mechanisms of initiating such structures need to be further explored.

**Developing viable funding models for both sewer and non-sewered systems is essential for effective promotion of FSSM:**

Despite growing awareness, FSSM is often viewed by national and state authorities as an interim solution until conventional sewer networks are established. Historical issues such as poor design, substandard construction, and lack of SOPs have resulted in many underperforming or dysfunctional FSTPs. Consequently, national funding has shifted towards conventional sewer systems. UNICEF's advocacy for non-sewered sanitation alongside sewer systems has been crucial, improving design and operational efficiency, and highlighting the benefits for

underserved communities. This has spurred interest among states and ULBs to secure FSTP funding from various non-traditional sources, such as rural sanitation programmes. However, the debate between sewered and non-sewered systems continues, needing further exploration and decisions based on technical and macroeconomic analyses to determine the best value for money. Additionally, while states focus on infrastructure, the recovery of operational costs, including long-term maintenance, often goes overlooked. Developing financially viable business models that ensure cost recovery is essential for sustainable sanitation services. These considerations should be integral to the procurement processes of ULBs.

**Promotion of innovative solutions is critical for addressing FSSM challenges:** Planning and constructing sanitation infrastructures in urban areas often encounter multiple challenges; for example, unavailability of suitable land, increased cost for land, opposition from communities adjacent to the treatment plants. The concept of urban–rural convergence is a promising example of how rural and urban settlements can mutually benefit from a shared or area-wide FSSM system built in rural locations. Such area-wide systems can serve urban areas and rural hot spots of faecal sludge generation, especially schools, hospitals, weekly markets. The aggregation of faecal sludge demand also provides added economies of scale to the systems by serving a larger population and bringing down investment and operational costs of the system, while serving a larger area.

**Developing and improving standards for effluent quality monitoring is critical:** The issue of monitoring effluent quality is critical for improving FSSM. Implementing practical and effective national standards, alongside rigorous enforcement through laws, is essential to ensure that the effluent discharged from FSSM processes meets environmental safety standards. The national standards define the level of treatment required and thus determine the process, type of

treatment systems and the financial investments needed for operationalizing the FSSM systems. At a local level, effective enforcement and compliance monitoring systems as defined by city-level by-laws should be in place to support effective operation of treatment facilities.

More information on the Bill & Melinda Gates Foundation supported FSSM project in India is available [here](#).

## Next steps

**Scaling up of innovative solutions:** Building on previous achievements, the project will explore and adopt innovative sanitation strategies/approaches to meet contemporary challenges effectively. For instance, the introduction of the Sanitation Chariot, which communicates localized and culturally identifiable messages, represents a novel approach for awareness-raising. The rural–urban convergence or area-wide approach that achieves economies of scale by serving a larger area can be upscaled to other towns in the four states.

**Improved advocacy at national and state levels:** Advocacy efforts to secure adequate resources for FSSM in the four states need to be increased and sustained. Generating evidence for FSSM as a crucial on-site system to reach the poor and marginalized needs to be undertaken alongside improving design and operational efficiency of existing and planned FSTPs. As the debate between sewered and non-sewered systems continues, further exploration and decisions based on technical and macroeconomic analyses to determine the best value for money should be undertaken. Additionally, further emphasis should be placed on advocacy for the improved management of sanitation systems rather than technology options, be it on site or sewered. Advocacy efforts should also be focused on supporting cities to develop sanitation plans that have short-, medium- and long-term solutions to be implemented based on available resources and urgency to achieve the SDG 6.2 targets.

**Strengthening of ULB coordination:**

Maintaining consistent coordination and implementation across diverse ULBs is essential to meet the 25 per cent treatment target. To facilitate this, UNICEF and its partners are committed to providing robust support to ULBs in the form of technical guidance and assistance, sharing best practices, developing training materials and policy updates, and monitoring progress across all ULBs.

**Sustained awareness creation on FSSM:**

Explore sustained funding solutions/mechanisms to support ongoing and future communication efforts for FSSM via long-term partnerships with stakeholders, including government bodies, private sector entities and international donors that are committed to public health promotion.

Furthermore, more focus should be on increasing the involvement of local communities and community leaders in the development and dissemination of BCC materials to enhance the relevance and acceptance of the messages.

**Strengthen partnerships for FSSM capacity-building and promotion:**

UNICEF will intensify efforts to enhance its collaboration and partnerships with state and non-state agencies to enrich training and capacity-building initiatives for FSSM in India. This includes partnership that brings together and strengthens all relevant government institutions, parastatals and NGOs to support community empowerment and participation in inclusive planning and implementation of FSSM.

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