

***Rising for Rights for Strengthening Civil Society Network  
in South Asia to Achieve SDG 6  
FANSA-Bangladesh***

# ***CWIS Action Plan***

**Sreemangal Municipality, Moulvibazar, Bangladesh**

**Study Led by: Dr. Md. Mujibur Rahman**



**SKS**

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## **Rising for Rights for Strengthening Civil Society Network in South Asia to Achieve SDG 6**

*(Rising for the Rights Project, FANSA-Bangladesh)*

# ***CWIS Action Plan***

***Sreemangal Municipality, Moulvibazar, Bangladesh***

## Foreword

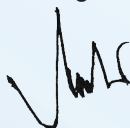
Urbanization is growing rapidly in Bangladesh. The style and nature of urbanization in Bangladesh are not similar to other countries. As a consequence of urbanization, city dwellers face multi-faceted problems. The population living in low-income communities in urban settings has increased, leading to poor sanitation conditions and a higher risk of water-borne diseases. The quality of drinking water is often contaminated due to poor supply and/or facilities. To combat these problems, the government and development organizations are emphasizing the promotion of safely managed sanitation services (SMSS) following the city-wide inclusive sanitation (CWIS) approach.

As the FANSA-Bangladesh Secretariat, SKS Foundation has been implementing the project *Rising for Rights for Strengthening Civil Society Networks in South Asia to Achieve SDG 6* alongside other members of this advocacy network. The Project covers the cities/towns under 3 geophysical locations namely Barishal City Corporation, Barishal; Sreemangal Municipality, Moulvibazar; and Gaibandha Municipality & Muktinagar Union, Gaibandha.

Focusing on the sanitation situation assessed through a comprehensive study to frame a Shit Flow Diagram (SFD) covering Sreemangal Municipality, FANSA-Bangladesh realizes that there is no alternative to a CWIS planning to effectively promote SMSS through the duty-bearers in Sreemangal town. Concerning this, SKS Foundation has developed a CWIS Action Plan for Sreemangal Municipality in partnership with Manifold Assistance Center for Bangladesh (MAC-Bangladesh), the implementing FANSA-Bangladesh member in Sreemangal. The CWIS Action Plan has been developed as a pragmatic & practical one with the active participation of the duty-bearers, professionals, relevant stakeholders and the community people from different tiers in consultations, FGDs & KIIs and field observation.

I express my heartfelt thanks & gratitude to Dr. Md. Mujibur Rahman, Professor, Department of Civil Engineering & Director, CSIRS-UIU, and his team members for leading the study for the development of the CWIS Action Plan for Sreemangal Municipality professionally.

I appreciate MAC Bangladesh and my colleagues at SKS Foundation for their efforts in organizing & supporting the conduction of the study and development of the CWIS Action Plan. I believe, the CWIS Action Plan will be used as a ready reference by Sreemangal Municipality and other service providers in promoting safely managed sanitation services inclusively in Sreemangal town.



**Rasel Ahmed Liton**  
Chief Executive  
SKS Foundation



# Preface

Sanitation is a fundamental human right, and ensuring that every individual has access to safe, adequate, and inclusive sanitation services is crucial for the overall well-being of the citizens of a municipality. The City-wide Inclusive Sanitation Plan (CWIS Plan) for Sreemangal Paurashava (Municipality) in Moulvibazar, Sylhet, Bangladesh, represents a significant step towards achieving sustainable and equitable sanitation for all its residents. This Plan is a testament to our commitment to improving public health, environmental sustainability, and social equity within the Sreemangal community.

The CWIS approach emphasizes the importance of inclusivity, recognizing the diverse needs of the population, including the poor, marginalized, and vulnerable groups. By adopting this approach, we aim to create a sanitation system that is not only efficient and effective but also equitable and just.

This report outlines the strategic framework and actionable steps required to implement the CWIS Plan in Sreemangal Municipality. It includes a comprehensive analysis of the current sanitation landscape, identifies key challenges, and proposes innovative solutions to address these issues. The Plan also highlights the importance of community engagement, stakeholder collaboration, and capacity building to ensure the successful implementation and sustainability of the proposed initiatives.

We extend our gratitude to all the stakeholders, including local government officials, community leaders, non-governmental organizations (NGOs), and international partners, who have contributed to the development of this Plan. Their insights, expertise, and support have been invaluable in shaping a vision for a cleaner, healthier, and more inclusive Sreemangal.

As we embark on this journey towards improved sanitation, we call upon every member of the Sreemangal community to join hands in making this vision a reality. Together, we can build a future where everyone has access to safe and dignified sanitation services, thereby enhancing the quality of life for all residents of Sreemangal Municipality.



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# **Rising for Rights for Strengthening Civil Society Network in South Asia to Achieve SDG 6**

## ***City-wide Inclusive Sanitation (CWIS) Action Plan***

***Sreemangal Municipality, Moulvibazar, Bangladesh***

Prepared by:

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## ***Abbreviations***

|         |   |
|---------|---|
| CSDA    | City Sanitation Service Delivery Assessment                         |
| CSIRS   | Center for Smart Infrastructure Resilience and Sustainability       |
| CWIS    | City Wide Inclusive Sanitation                                      |
| DPHE    | Department of Public Health Engineering                             |
| FANSA   | Freshwater Action Network South Asia                                |
| FGD     | Focus Group Discussion  |
| FS      | Fecal Sludge  |
| FSM     | Fecal Sludge Management   |
| FSTP    | Fecal Sludge Treatment Plant  |
| IRF-FSM | Institutional and Regulatory Framework for Faecal Sludge Management |
| KII     | Key Informant Interviews  |
| LGED    | Local Government Engineering Department                             |
| NGO     | Non-Government Organization   |
| SDG     | Sustainable Development Goals                                       |
| SFD     | Shit Flow Diagram   |
| SMSS    | Safely Managed Sanitation Systems                                   |
| SuSanA  | Sustainable Sanitation Alliance                                     |
| UIU     | United International University                                     |
| WASH    | Water, Sanitation, and Hygiene                                      |

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## Background

In Bangladesh, people are moving to urban areas at a significant rate. According to the Population and Housing Census of 2022, 31.5% of the population is dwelling in an urban setting which increased more than 50% in the last 10 years. However, the country lacks proper city planning and is not equipped to overcome the sanitation challenges that come with population surges. Although sanitation and hygiene practices have significantly improved over the years, only 32.44% of rural sanitation facilities are safely managed. In the urban areas, the situation is worse as approximately 70% of the sanitation facilities are not safely managed (JMP, 2022).

As Bangladesh aims to reach the Sustainable Development Goals (SDG) by 2030, it is imperative to prioritize the current state of sanitation, which falls within the scope of SDG 6 (Clean Water and Sanitation). The government and development partners are promoting Safely Managed Sanitation Systems (SMSS), through a City-wide Inclusive Sanitation (CWIS) approach in urban areas. To enhance CWIS promotion, there's a need to advocate for better policy implementation and address gaps with a clear focus on climate resilience and equity issues.

As part of the advocacy network covering the South-Asian countries, FANSA-Bangladesh focuses on SMSS in the city areas with the promotion of City-wide Inclusive Sanitation (CWIS) by the service providers under the project ***Rising for Rights for Strengthening Civil Society Networks in South Asia to Achieve SDG 6 Project*** (hereinafter Rising for the Rights Project). The project includes services for creating Shit (Fecal waste) Flow Diagrams (SFD) and CWIS Action Plans for targeted areas that include one City Corporation- Barishal, two municipalities- Gaibandha & Sreemangal, and one union- Muktinagar, Gaibandha. The project also includes developing an evidence-based Advocacy Strategy and an Implementation Guideline for FANSA-Bangladesh to effectively promote CWIS. Successful implementation of the Rising for the Rights Project will contribute to strengthening civil society networks in South Asia to achieve SDG 6.

***SKS Foundation (FANSA-BD Secretariat)*** entered into an agreement with the ***Center for Smart Infrastructure Resilience and Sustainability (CSIRS)*** of the ***United International University (UIU)*** for conducting the above-mentioned studies under the ***Rising for the Rights Project***.

## Objective

The primary objective of this CWIS Action Plan is to ensure equitable, sustainable, and safe sanitation services for all residents of Sreemangal Municipality, in alignment with the Sustainable Development Goals (SDG), particularly SDG 6 (Clean Water and Sanitation). This Plan aims to improve public health, environmental sustainability, and social equity by providing access to safely managed sanitation services and addressing gaps in the existing sanitation service chain.

# City-wide Inclusive Sanitation

Citywide Inclusive Sanitation (CWIS) is an all-encompassing approach to urban sanitation that focuses on meeting the needs and upholding the rights of every resident, irrespective of their socioeconomic background, gender, or abilities. CWIS aims to ensure that everyone has access to safe, affordable, and sustainable sanitation services, while also enhancing public health, environmental sustainability, and social equity. CWIS stands on the following **seven principles**:

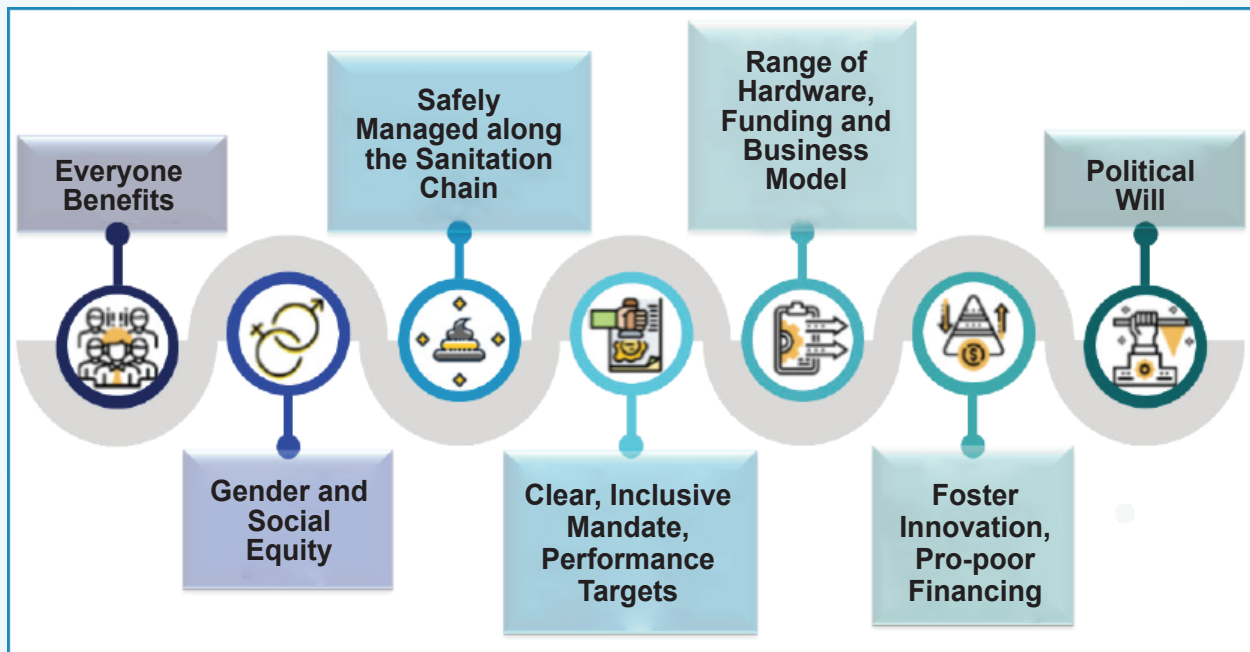


Figure 1: CWIS Principles

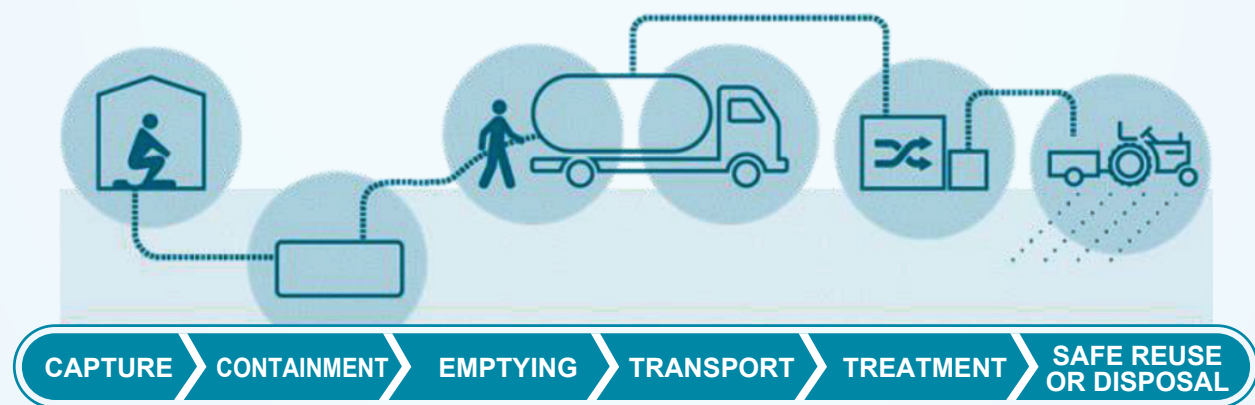
These principles emphasize:

- 1. Equitable Access for All:** Sanitation services should be inclusive, ensuring that everyone, including the urban poor and transient populations, has access to safe sanitation. Service pricing should reflect service levels and affordability, with subsidies for the poorest.
- 2. Gender and Social Equity:** Planning and management should prioritize the needs of marginalized groups, including women and those without formal land tenure, while protecting workers' health and rights.
- 3. Safe Management of Human Waste:** Sanitation systems should ensure safety at every stage, from waste containment to disposal or reuse, safeguarding groundwater and the environment.
- 4. Clear Mandates and Accountability:** Authorities should have clear mandates, performance targets, and accountability mechanisms to ensure effective urban sanitation services, especially for the poor.
- 5. Diverse Approaches to Funding and Technology:** Authorities should use a variety of funding models and both sewered and non-sewered solutions to meet sanitation goals, engaging the private sector when appropriate.
- 6. Comprehensive, Long-term Planning:** Planning should be informed by an analysis of needs, resources and constraints, including climate change and water constraints, and coordinated with other urban services.



**7. Political Will and Accountability:** Governments should demonstrate commitment to inclusive sanitation through transparent budgets, institutional reforms, and accountability systems that empower marginalized communities.

The **CWIS Service Framework** has been designed to implement all the principles of CWIS in a planned and programmatic way. Successful implementation of the CWIS framework will provide inclusive sanitation services, prioritizing marginalized and vulnerable populations, ensuring that human waste is safely managed throughout the sanitation service chain, and promoting long-term sustainability through resource recovery and efficient service delivery. The safely managed sanitation service chain includes the stages of capture (in a hygienic toilet), safe containment (and treatment in situ if appropriate), emptying, transport, treatment and safe disposal/reuse as shown in the figure below:



*Figure 2: Safely Managed Sanitation Service Chain*

To obtain expected CWIS outcomes, clear roles and responsibilities at municipal and national levels are vital, along with data-driven accountability mechanisms that track performance and ensure compliance through regulatory incentives or penalties. The framework also emphasizes effective resource management, incorporating innovative technologies and business models to maintain financial, environmental, and social sustainability. Ultimately, CWIS seeks to improve public health, promote social and gender equity, and foster economic and environmental benefits across urban areas.

The CWIS Service Framework is illustrated below:

| CORE CWIS OUTCOMES  | EQUITY   | SAFETY  | SUSTAINABILITY  |
|---------------------|--|---|---|
|                     | Services reflect fairness in distribution and prioritization of service quality, prices, deployment of public finance/ subsidies | Services safeguard customers, workers and communities from safety and health risks by reaching <i>everyone</i> with safe sanitation | Services are reliably and continually delivered based on effective management of human, financial and natural resources |
| CORE CWIS FUNCTIONS | RESPONSIBILITY   | ACCOUNTABILITY  | RESOURCE PLANNING AND MANAGEMENT  |
|                     | Authority(s) execute a clear public mandate to ensure safe, equitable and sustainable, sanitation services for all               | Authority's performance against its mandate is monitored and managed with data, transparency, and incentives                        | Resources–human, financial, natural, assets–are effectively managed to support execution of mandate across time/ space  |

Figure 3: CWIS Service Framework

The responsibility for implementing CWIS in municipalities rests with the municipal authority, with policy support provided by the Local Government Division. *Municipalities should form a CWIS Unit (or Cell)* which will work in coordination with DPHE, NGOs, Ward level coordination committees and the existing standing committee on health, water & sanitation. The typical institutional arrangement for providing CWIS at the Municipality level is shown in the following figure:

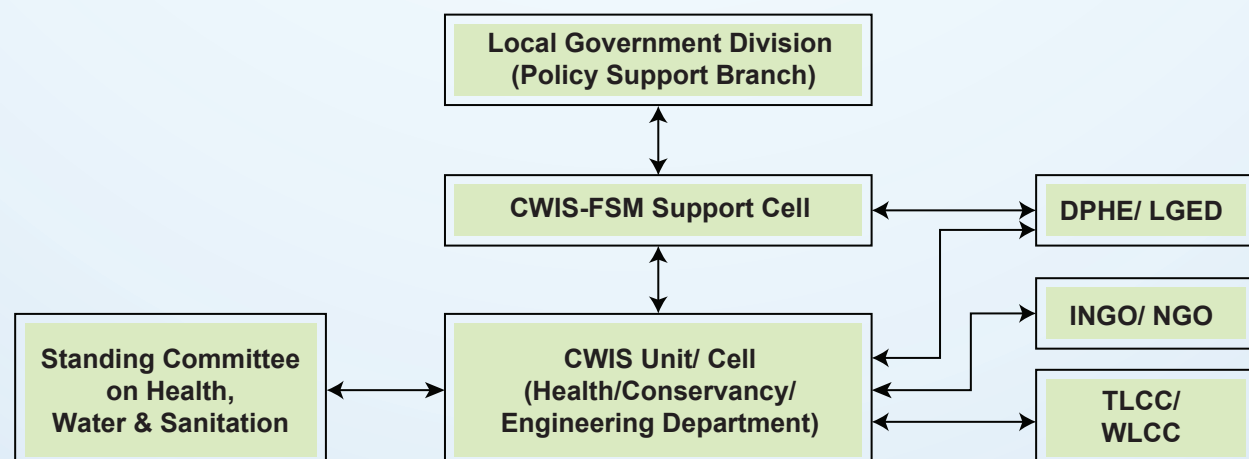


Figure 4: CWIS Institutional Structure at Paurashava Level



## Review of Relevant Policies, Strategies and Acts

The success of Citywide Inclusive Sanitation (CWIS) planning hinges on a thorough understanding of relevant national and local policies, acts, and strategic frameworks governing water, sanitation, and hygiene (WASH) services in Bangladesh.

These documents provide the legal and institutional bases for implementing Citywide Inclusive Sanitation (CWIS) and fecal sludge management (FSM). Notable policies include the *Local Government (Paurashava) Act 2009*, which defines municipal responsibilities, the *National Sanitation Strategy 2005*, and the *Institutional and Regulatory Framework for FSM (2017)*, which provides specific guidelines for safe sanitation practices. Other important documents include the *Bangladesh National Building Code (2020)* and *Pro-Poor Strategy for Water and Sanitation (2020)*, which provide design standards and standards for ensuring sanitation access for all, especially low-income communities respectively.

The following table summarises the related documents that were reviewed for preparing the CWIS Action Plan:

*Table 1: List of Policies, Strategies, Acts*

|  |  |
|--|--|
| Local Government (Paurashava) Act, 2009  | Defines the overall role of Municipalities   |
| Institutional and Regulatory Framework for Faecal Sludge Management (IRF-FSM) for Paurashavas, 2017                            | The <i>Local Govt Act 2009</i> defines the roles and responsibilities of municipalities and other concerned institutions in ensuring safe and adequate sanitation    |
| Implementation of Institutional and Regulatory Framework for Faecal Sludge Management National Action Plan (Paurashavas), 2020 | Recommended specific actions at national and Paurashava levels to implement FSM  |
| National Sanitation Strategy, 2005   | Provides guidelines for safe, hygienic sanitation, faecal sludge management & strategies for improved urban sanitation   |
| National water supply and sanitation strategy, 2014 (revised and updated 2021)   | Provides uniform strategic guidelines to sector stakeholders, including the government, semi-government and local government institutions, private sectors and NGOs. |
| The Bangladesh Environmental Conservation Rules (2023)   | Provides standards for domestic sewage and industrial discharges   |
| Bangladesh National Building Code (BNBC), 2020   | Provides standards for sanitation facilities in buildings  |
| Pro-Poor Strategy for Water and Sanitation Sector in Bangladesh, 2005 (revised 2020)   | Recommends sanitation standards for low-income communities   |
| Sreemangal Master Plan (2011-2031)   | Provides the current scenario and development plans for Sreemangal Municipality  |

## Profile of Sreemangal Municipality

Sreemangal is a fast-growing town, which is 191 km away from Dhaka city. It is well connected by roads and railways. It is one of the oldest towns and was declared an “A” class Municipality in 2002. The Municipality covers an area of 2.58 square kilometers. The Sreemangal Municipality is governed by a Mayor, and 9 Councillors for 9 wards.

Based on the Population and Housing Census (2022) by the Bangladesh Bureau of Statistics (BBS), Sreemangal Municipality has a total of 5,414 households. With a population of 23,326 in 2022 and a growth rate of 0.9%, it can be estimated that the current population of Sreemangal Municipality is approximately 23,750.

Sreemangal is well known for its tea production and tourism. The main source of revenue of the Municipality comes from the lease of different Bazar (Hat) and tourism.

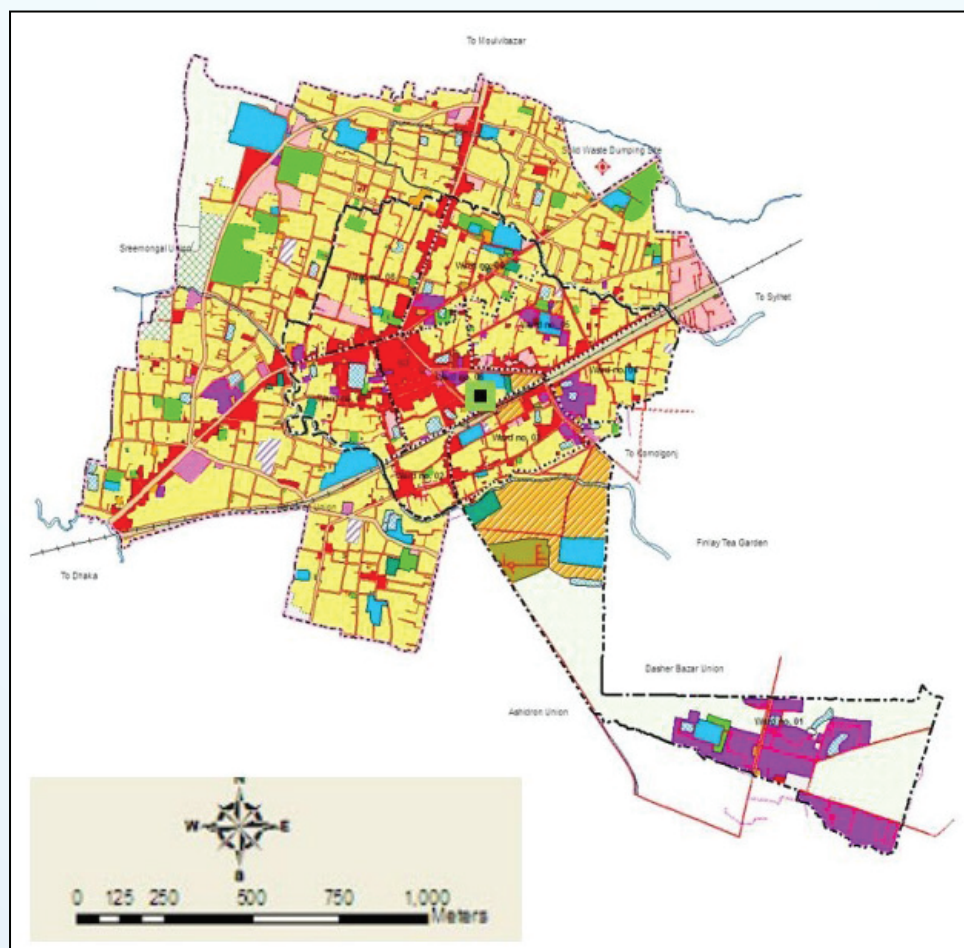


Figure 5: Sreemangal Municipality

According to the Bangladesh Meteorological Department, the city area and surrounding area experience a tropical monsoon climate. It is characterized by warm, humid summers and cool, and dry winters. About 90% of the total annual rainfall occurs in the period from May through October. The driest months of the year are November to March. The maximum mean temperature observed is 31.3-34.2°C between April-August and the minimum mean temperature is between 12.1-13.7°C in January. The annual average rainfall is about 2,081 mm, according to BMD (1981-2017).

## Assessment of Existing Sanitation Situation

Evaluating the current sanitation conditions is an essential component of CWIS planning. Using primary and secondary sources all relevant data were collected. For Sreemangal Municipality, a field survey was conducted, forming the basis for preparing an intermediate-level SFD Report. Throughout the process, stakeholders were actively involved through consultations, focus group discussions (FGDs), and key informant interviews (KIIs), ensuring a participatory approach to understanding the local sanitation challenges.

### Field Survey

A questionnaire survey was carried out to gain a comprehensive understanding of the on-ground sanitation practices and infrastructure within Sreemangal Municipality. The survey involved approximately 400 households, ensuring a confidence level of at least 95% with a 5% margin of error. To ensure the field data quality, the data collection team (8-10 enumerators) were properly trained. The survey covered various aspects of the entire sanitation value chain. Few of the relevant questions on sanitation were: 1) User interface of the toilet, 2) Type of containment, 3) Outlets from the containments, 4) Desludging of septic tanks and latrine pits, 5) Desludging frequency, 6) Responsibility of desludging, 7) Desludging process, 8) Location of sludge disposal, 9) Water supply source and risk of contamination and 10) Transportation, treatment and reuse of faecal sludge.



*Figure 6: Typical Sanitation Scenario of Sreemangal Municipality*

Sreemangal Municipality lacks a centralized sewer system, with most households relying on on-site containment systems, such as pit latrines and septic tanks. Various types of pit latrines, including direct pit (20.3%), twin offset pit (1.2%), and single offset pit (26.5%) were observed during the household survey. Despite the safety advantages of alternate twin offset pit latrines over single pits, only a small number of households were found using them. Septic tanks are used by 44.8% of the population; however, only 3.2% of these are connected to soak pits. Alarmingly, approximately 53% of on-site containment systems are connected to open drains, creating significant public health risks. Furthermore, open defecation remains a critical issue, with 5.1% of residents lacking access to any form of toilet and resorting to open defecation.



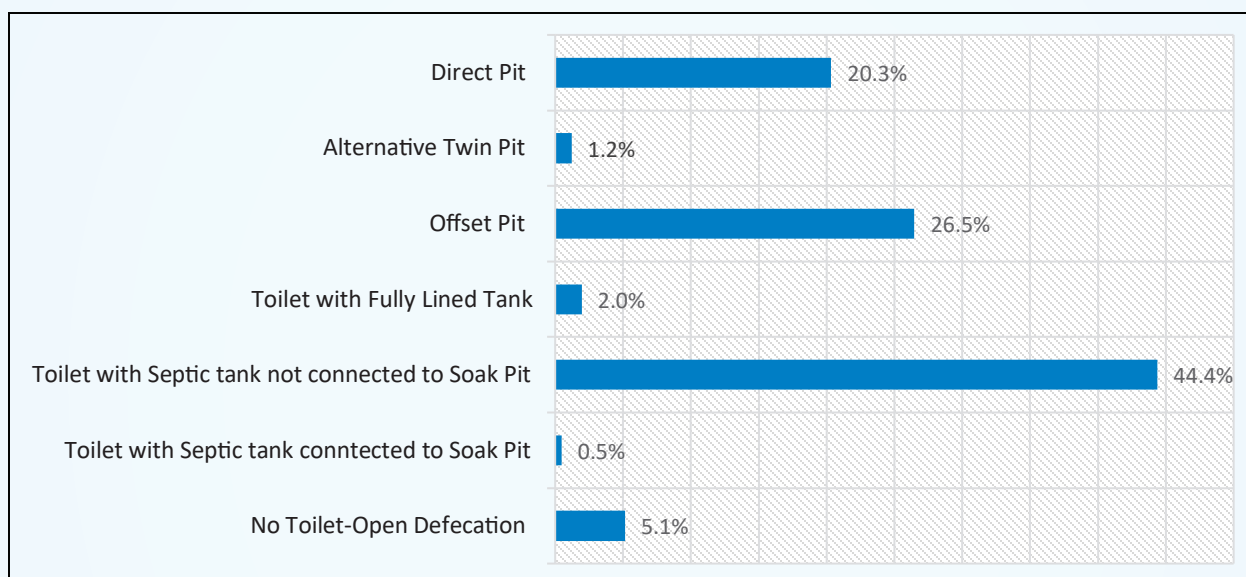


Figure 7: Containment type in Sreemangal Municipality

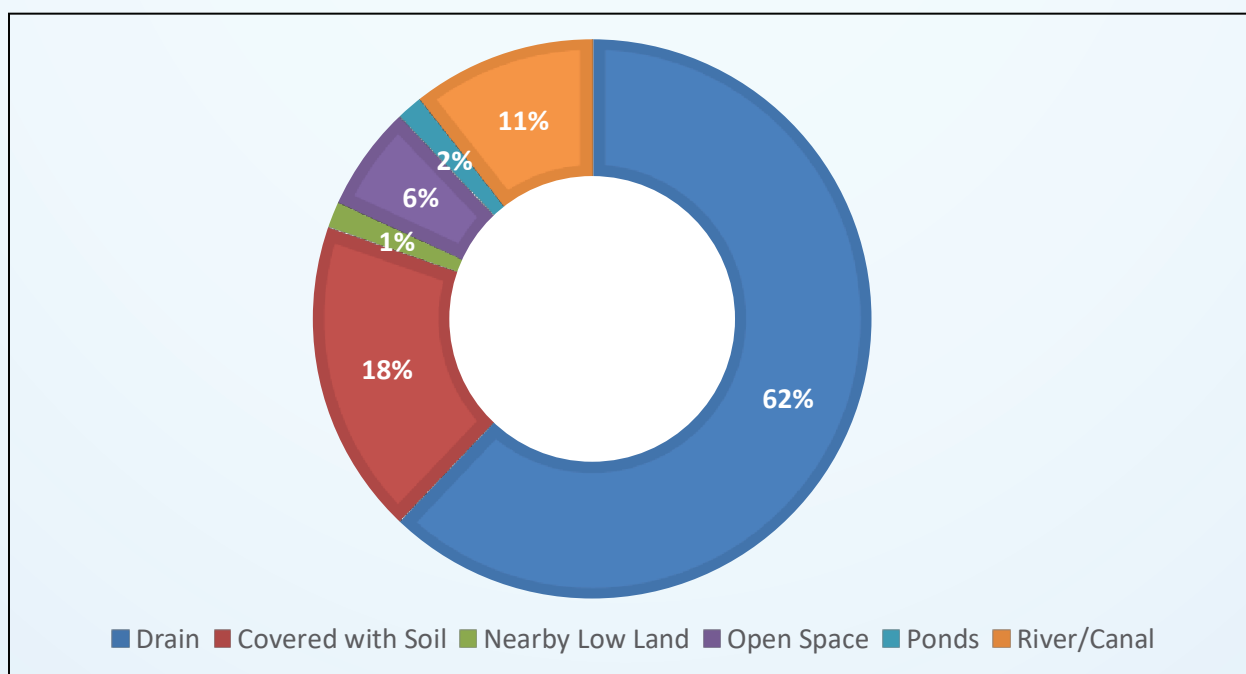


Figure 8: Sludge disposal location

The municipality also faces severe challenges in faecal sludge management, as there are no facilities for sludge transport, no designated disposal stations, and no treatment infrastructure. The survey revealed that only 16% of the containments have ever been emptied and 62% of the emptied sludge is disposed in drains. In addition, 98.5% of the emptying is done manually without using proper safety gears which is not only a severe health risk but also occasionally leading to casualties. This precarious state of sanitation and hygiene in the area underscores the need for immediate intervention.

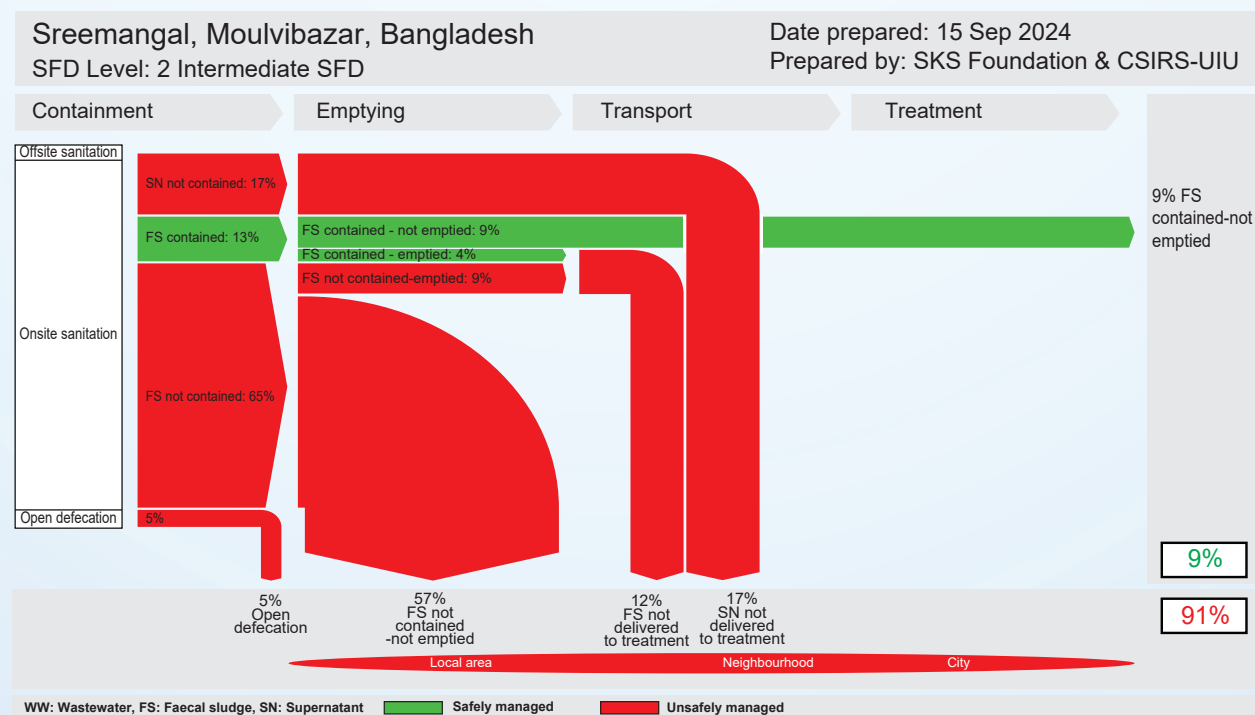
## Shit (Fecal Waste) flow diagram (SFD)

SFD is a diagnostic tool that presents a clear overview of the pathways taken by excreta from defecation to disposal along the sanitation service chain in urban areas. The model provided by the Sustainable Sanitation Alliance (SuSanA) was followed to create the SFD for Sreemangal Municipality. The complete SFD (Intermediate level) Report for Sreemangal Municipality has been submitted to SKS Foundation earlier.

Use of the SFD method enables a standardized assessment of excreta flows in selected areas. Excreta which are safely managed and move along the sanitation service chain are represented by green arrows moving from left to right in the graphic, while excreta which are unsafely managed are represented by red arrows. The width of each arrow is proportional to the percentage of the population whose excreta contributes to that flow (SFD Manual, 2018).

The outcome of the SFD graphic shows that only nine percent (9%) of the excreta flow is classified as safely managed, and the remaining ninety-one percent (91%) is classified as unsafely managed within the Sreemangal municipal area. It should be noted that the proportion of safely managed fecal sludge is based on the findings that pits and septic tanks that have never been emptied, which might turn into unsafe practices in the future when these pits and septic tanks are emptied without having safe transport and treatment facilities in place. Majority of the unsafely managed excreta originates from unsafe containment connected to drains, lowlands and nearby waterbodies instead of safe emptying and treatment. Key issues affecting sanitation service delivery in Sreemangal are the lack of any FSTP, designated disposal ground/trenches, and the complete absence of mechanical emptying and transport systems. The unsafely managed excreta originate from the following sources:

- o FS not contained- not emptied 57% - unsafe disposal into the open environment
- o Open Defecation 5%
- o FS not delivered to treatment 12% - unsafe disposal in the open environment
- o Supernatant not delivered to treatment 17% - unsafe disposal in the open environment



The SFD Promotion Initiative recommends preparation of a report on the city context the analysis carried out and data sources used to produce this graphic. Full details on how to create an SFD Report are available at [sfd.susana.org](http://sfd.susana.org)

Figure 9: SFD of Sreemangal Municipality

## Stakeholders' Consultation/ Engagement

The stakeholder consultation/ engagement in Sreemangal Municipality involved several methods to gather insights into local sanitation challenges. These included Key Informant Interviews (KIIs), Focus Group Discussions (FGDs), and consultation.

**Key Informant Interviews (KIIs):** These were conducted with municipal officials, NGO representatives, and ward council members. Key issues highlighted included the absence of a faecal sludge treatment plant, inadequate sludge transport facilities, and a high percentage of containment systems improperly connected to lakes or drains. Additionally, open defecation remained prevalent in some wards, and there was a general lack of community awareness regarding proper sanitation practices.



*Figure 10: Stakeholder Consultation/Engagement*

**Focus Group Discussions (FGDs):** Participants, including municipal officials and women leaders, voiced concerns about widespread improper connections of septic tanks to drains and water bodies. The sanitation-related department was reported to be severely understaffed, making effective management difficult. The need for necessary infrastructure improvements, as well as awareness campaigns, was emphasized.

**Stakeholders' Consultation:** Municipal officials, private sector workers, representatives from women's organizations, and NGOs participated in a stakeholder consultation focused on the concept of city-wide inclusive sanitation (CWIS). During the meeting, attendees were familiarized with the foundational principles of CWIS and its potential to enhance sanitation outcomes within the community. The participants were presented with the Shit Flow Diagram (SFD), which raised significant concerns regarding the current sanitation conditions.

Key discussions centered around the widespread lack of awareness about proper sanitation practices among community members. Additionally, participants expressed concern about the limited availability of suitable land for establishing a faecal sludge treatment plant (FSTP), which poses a significant barrier to effective faecal sludge management. The consultation underscored the need for increased community education and the exploration of innovative solutions to address the constraints in the implementation of necessary sanitation infrastructure.

## City Sanitation Service Delivery Assessment (CSDA)

The CSDA is a complementary tool that assesses why the sanitation situation is as it is. CSDA separately addresses both sewered and non-sewered sanitation.

The Full CSDA is structured around three pillars: enabling, delivering, and sustaining. There are 48 questions in full CSDA, 24 of which are set for sewered system and the rest are for the non-sewered system. Each question can be scored with 0 (poor), 0.5 (developing), or 1 (good) on those questions. Each question is scored along the whole service chain. The scores are based on document review and information obtained by interaction with stakeholders.

# CSDA Full Assessment

City name

Sreemangal Municipality

Date

September 2024

## Non-sewered sanitation

|                                 | Toilet, pit<br>or septic<br>tank | Emptying<br>& transport | Sludge<br>treatment<br>& reuse |
|---------------------------------|----------------------------------|-------------------------|--------------------------------|
| <b>Enabling</b>                 |                                  |                         |                                |
| Policy, legislation             | 0.5                              | 0.5                     | 0.5                            |
| Planning, budgeting             | 0.3                              | 0.3                     | 0.3                            |
| Inclusion                       | 0.0                              | 0.0                     |                                |
| <b>Delivering</b>               |                                  |                         |                                |
| Funding                         | 0.0                              | 0.0                     | 0.0                            |
| Capacity, outreach              | 0.2                              | 0.2                     | 0.2                            |
| Inclusion                       | 0.0                              | 0.0                     |                                |
| <b>Sustaining</b>               |                                  |                         |                                |
| Regulation, cost recovery       | 0.2                              | 0.2                     | 0.2                            |
| Institutions, service providers | 0.1                              | 0.1                     | 0.1                            |
| Inclusion                       | 0.0                              | 0.0                     |                                |

Figure 11: CSDA Graphic

The CSDA graphic indicates that Non-sewered sanitation services in Sreemangal Municipality are overall poor. Policies and WATSAN committees exist on paper but lack proper action. The municipality's budget for sanitation has been quite limited. For the financial year 2022-2023, it was only TK 100,000. This same amount was allocated for 2023-2024. However, there is a planned increase to TK 300,000 for the 2024-2025 financial year. This gradual increase suggests a growing awareness and concern for sanitation issues, although the overall budget remains insufficient to fully address the needs related to sanitation management and sludge treatment. Some outreach activities are carried out on an ad-hoc basis and are not sufficient.

The staffing level of the municipality is inadequate. The organogram shows that they should have 22 people in the health and sanitation department but they have only two persons in the health department. This shortcoming prevents Sreemangal Municipality from imposing regulations properly and ensuring monitoring. Moreover, there are no inclusion criteria in the sanitation planning of Sreemangal.

## Gaps in Sanitation Service Chain

**Access to Toilets:** A significant proportion of the population in Sreemangal Municipality lacks access to proper sanitation facilities. Approximately 5.1% of residents still resort to open defecation due to the absence of toilets within their premises. This is particularly prevalent in areas with low socio-economic status, such as Ward-1, highlighting a critical gap in sanitation services.

**Inadequate Waste Management:** The existing faecal waste management system is inadequate, as there are no designated facilities for the transport and treatment of faecal sludge. Many septic tanks are improperly connected to open drains or water bodies, leading to environmental contamination and increased health risks. Regular emptying of on-site systems is low, with only about 16% having been emptied in the past year, indicating a lack of infrastructure for proper maintenance.

**Inadequate Manpower:** The municipality is severely understaffed, with only 2 personnel available in the sanitation sector compared to the proposed requirement of 22. This shortage hinders regular maintenance, monitoring, and enforcement of sanitation practices across the municipality. The lack of a sanitary inspector, in particular, makes it difficult to oversee and ensure compliance with hygiene standards.

**Lack of Sanitation Facilities in Public Spaces:** The absence of clean, accessible, and inclusive toilets in public places limits hygiene options for both residents and visitors, further contributing to sanitation challenges in the Sreemangal municipal town area.



## CWIS Action Plan for Sreemangal Municipality

The CWIS Action Plan has been developed considering the prevailing sanitation challenges and gaps in Sreemangal Municipality. Aligning with the target of the Bangladesh Government to achieve SDG 6 by 2030, this CWIS plan also aims to provide access to adequate and equitable sanitation and hygiene for all and end open defecation in Sreemangal Municipality by 2030.

The Action Plan is developed for implementation in three phases – (i) Short-term (2024-2026), (ii) Medium-term (2027-2030), and (iii) Long-term (2031 and beyond). Details of activities under each phase are given in the following table that are self-explanatory.

Table 2: CWIS Action Plan for Sreemangal Municipality (Paurashava)

| Improved and Safe Containment System  | Capacity Enhancement   | Mechanical Emptying and Safe Transportation of Faecal Sludge  | Treatment and Safe Disposal and/ or Re-use of Treated Faecal Sludge   |
|---|--|---|---|
| <b>Short-term:</b> By 2024-2026, 65% population of Sreemangal Paurashava will gain sustainable access to and use safely managed sanitation services through public engagement and awareness raising, institutional reform and technological solutions, and private sector engagement to reduce the health risks and minimize environmental pollution.   |  |   |   |
| <p><b>1. Upgrade/ Retrofit/ new development of 80% of unsafe containments</b> (From field survey: 5% open defecation, 20.3% single pit latrines, 26.5% offset pit, 44.4% septic tanks but not connected to soak pits) of Sreemangal Paurashava into safe ones by increasing containment capacity: building new pits or converting single pits into twin offset pits and connecting septic tanks to soak pits by following technical guideline through motivation/ enforcement.</p> <p><b>2. Sreemangal Paurashava will conduct an on-site sanitation compliance assessment</b> to develop a database and prepare an updated <b>Fecal Waste Flow Diagram (SFD)</b> including a Sanitation Roadmap.</p> <p>3. Paurashava with assistance from DPHE/LGED will develop technical (<b>design, operational &amp; monitoring</b>) guidelines</p> | <p><b>1. Paurashava will conduct public hearing events</b> to gain insight on the various aspects of CWIS.</p> <p><b>2. Form/activate Water &amp; Sanitation standing Committee</b> to oversee FSM activities</p> <p><b>3. Develop communication and campaign strategy</b> to make people understand the meaning of 'Safely Managed Sanitation Services' and 'City-wide Inclusive Sanitation' at the Paurashava level.</p> | <p><b>1. Implement mechanical emptying and safe transportation</b> of 65% containments (From field survey: 1.5% are emptied mechanically).</p> <p><b>2. Promote scheduled</b> desludging of 65% containments.</p> <p><b>3. Review and revise sanitation tax</b> considering desludging charges.</p> <p><b>4. Develop and design Apps/ hotline-based services</b> for ensuring scheduled desludging.</p> | <p><b>1. Treat/safe disposal</b> of fecal sludge of 65% containments of all Wards in Sreemangal Municipality (SFD intermediate report reveals that only 9% of FS in safely managed) through engaging private sector.</p> <p><b>2. Secure land</b> for FSTP construction. Initially, Sreemangal Municipality will require approximately 1 Acre of land. The municipality is suggested to go for 2/3 decentralized treatment plants preferably located in less densely populated Wards. The size, number and location of FSTPs are subject to change based on detailed study. Typical components of the FSTPs will be drying beds, storage sheds &amp; other ancillary facilities.</p> <p><b>3. Conduct a feasibility study</b> on technological solutions focusing on minimal land-intensive options for regional FSTPs covering 2 or more adjacent Paurashavas.</p> |

| Improved and Safe Containment System  | Capacity Enhancement  | Mechanical Emptying and Safe Transportation of Faecal Sludge   | Treatment and Safe Disposal and/ or Re-use of Treated Faecal Sludge   |
|---|---|--|---|
| <p><b>4. Paurashava will</b> facilitate and conduct coordination meetings with DoE, DPHE and other concerned agencies to review progress, technical advice and suggestions.</p> <p><b>5. Sreemangal Paurashava will construct public toilets in densely</b> populated areas and public spaces, with a focus on making these facilities accessible, inclusive, and safe for women, children, and people with disabilities.</p> | <p><b>4. Enhance Capacity building of the Municipality in terms</b> of manpower, resources and training for CWIS implementation with support from DPHE/ LGED. The current organogram proposes 22 people in the health and sanitation sector, however only 2 are employed and not adequately trained.</p> <p><b>5. Sharing best practices</b> through exchange visits.</p> | <p><b>5. Develop and design appropriate transportation equipment</b> for the HtR areas including narrow access areas (Slums/LICs).</p> <p><b>6. Procure equipment (e.g. vacuum tankers of 500L, 1000L &amp; 2000L capacity)</b> to ensure 65% mechanical emptying and transportation in Sreemangal Paurashava.</p> | <p><b>4. Develop guidelines/protocol/ business model</b> to involve the private sector in scaling up sustainable and inclusive sanitation services.</p> <p><b>5. Inclusion of FSM in the Paurashava Annual Development Plan</b> with a separate budget line with adequate fund allocation.</p> <p><b>6. Conduct a feasibility study on co-composting, compost use and demand, incentives, standardization, branding and certification, etc.</b></p> <p><b>7. Work with the Ministry of Agriculture</b> to ensure compost quality and promote the use of compost in agriculture.</p> |

| <b>Medium-term:</b> By 2027-2030, 100% population of Sreemangal Paurashavas will gain sustainable access to safely managed sanitation services through public engagement and awareness raising, institutional reform and technological solution, and private sector engagement to reduce the health risks and minimize environmental pollution.             |  |  |  |
|---|--|--|--|
| <p><b>1. Upgrade / Retrofit 100%</b> containments of all households of the Sreemangal Paurashava into safe ones by increasing containment capacity: constructing septic tanks and soak pits where applicable, building new pits or converting single pits into alternating twin offset pits by following technical guidelines and ensuring enforcement.</p> | <p><b>1. Paurashava will continue to conduct Public hearing events</b> to gain insight into the various aspects of CWIS and assess progress.</p> <p><b>2. Review and revise</b> communication and campaign strategy to understand and practice of 'Safely Managed Sanitation Services' and 'City-wide Inclusive Sanitation' at the Paurashava level.</p> | <p><b>1. Promote mechanical emptying</b> and safe transportation of 100% containments.</p> <p><b>2. Ensure scheduled desludging</b> of 100% containments of all PSs using Apps/ hotlines-based services.</p> <p><b>3. Review and revise sanitation tax</b> considering desludging charges.</p> | <p><b>1. Treat/safe disposal of faecal sludge</b> of 100% containments at designated FSTPs.</p> <p><b>2. Design and implement regional integrated FSTPs</b> where applicable.</p> <p><b>3. Construct and operate FSTP</b> and Secure land for extension as required.</p> <p><b>4. Inclusion of FSM in the Paurashava Annual Development Plan</b> with a separate budget line with adequate fund allocation.</p> <p><b>5. Encourage the Private sector</b> to implement co-composting technologies.</p> |

| Improved and Safe Containment System   | Capacity Enhancement  | Mechanical Emptying and Safe Transportation of Faecal Sludge  | Treatment and Safe Disposal and/ or Re-use of Treated Faecal Sludge  |
|--|---|---|--|
| <p><b>2. Paurashava</b> will continue to facilitate and conduct <b>coordination meetings</b> with DoE, DPHE and other concerned agencies for reviewing progress, technical advice and suggestions.</p> | <p>3. Continue <b>capacity building/ refresher training on CWIS</b> implementation with the support of DPHE/ LGED.</p> <p><b>4. Impact study</b> on the Capacity building and campaign program including revision, recommendation and way forward.</p> <p>5. Continue sharing <b>best practices through exchange visits</b></p> | <p><b>4. Procure additional equipment</b> to promote 100% mechanical emptying and transportation.</p> | <p><b>6. Build linkages</b> between private sectors and the Ministry of Agriculture for market expansion of compost.</p> <p><b>7. Enhance demand and marketing</b> of compost including standardization, branding and certification.</p> |

|   |   |   |   |
|---|---|---|---|
| <p><b>Long-term:</b> By 2031 and beyond, Sreemangal Municipality will take the lead to ensure city-wide inclusive sanitation services through public engagement and awareness raising, sector coordination and collaboration, <i>to develop a clean, green and smart Paurashava.</i></p>  |   |   |   |
| <p><b>1. Transform/ upgrade</b> all containment systems into safe and sustainable systems employing new/emerging technologies that may be available.</p> <p><b>2. Continue standard design checks</b> of the containment system and enforce changes as required.</p> <p><b>3. Private sectors</b> to provide quality and sustainable services maintaining high standards of containment system.</p> | <p><b>1. Continue implementation of campaign strategies</b> focusing continued use of safe sanitation services and application of advanced technologies for maximum resource recovery.</p> <p><b>2. Evaluation of the</b> capacity building and campaign program.</p> <p><b>3. Continue capacity/ refresher training</b> program for the relevant stakeholders.</p> | <p><b>1. Consumers</b> use apps/ hotlines-based services for emptying of containment.</p> <p><b>2. Use of advanced, smart mechanical equipment for safe emptying and transportation</b> to designated disposal and /or treatment locations.</p> | <p><b>1. Private sectors</b> manage individual or regional FSTPs.</p> <p><b>2. Create a Private sector-led compost hub/network</b> for compost demand and supply chain.</p> |

## CWIS Plan Implementation Monitoring:

It would be crucially important to develop an appropriate system to monitor fecal sludge safe containment regularly and monitor all other activities along the entire sanitation chain to ensure the progress of safely managed sanitation services. For effective monitoring, however, it is important that relevant monitoring indicators are identified, and mechanisms devised that can be adopted locally. The monitoring data would then be analyzed and evaluated to assess progress, inclusivity and continual improvement.

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## Annexes:

### Annex I: Additional Photos of Engagement with Stakeholders and Field Survey



## Annex II: List of Stakeholders

| Name                       | Designation   |
|----------------------------|---|
| 1. Md. Mahbub Alom Patwari | Secretary<br>Sreemangal Paurashava                  |
| 2. S.A. Hamid              | Executive Director<br>MAC Bangladesh                |
| 3. Mst. Tania Akter        | Lady Councilor, Ward-1,2,3<br>Sreemangal Paurashava |
| 4. Lipi                    | Member, Ward-4<br>FANSA Women Forum                 |
| 5. Kajol                   | Member, Ward-7<br>FANSA Women Forum                 |
| 6. Rukhshana Akter         | Member, Ward-9<br>FANSA Women Forum                 |
| 7. Narayan Babu            | NGO Worker, Ward-6<br>Sreemangal Paurashava         |
| 8. Sweety Akter            | Member, Ward-5<br>FANSA Women Forum                 |
| 9. Md. Mahbub Alom Patwari | Secretary<br>Sreemangal Paurashava                  |
| 10. Md. Abdul Jobbar Azad  | Councilor, Ward-2<br>Sreemangal Paurashava          |
| 11. Md. Arman Khan         | Chief Coordinator<br>MAC Bangladesh                 |
| 12. Pankaj Ghosh Dostider  | Project Manager<br>Idea                             |
| 13. Md. Shaded             | Program Officer<br>Idea                             |
| 14. Kajol                  | Women Leader  |
| 15. Parvin Begum           | Women Leader  |
| 16. Shahriar Ahmed Shaiket | Community Leader                                    |
| 17. Asma-UI-Husna          | Community Leader                                    |




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