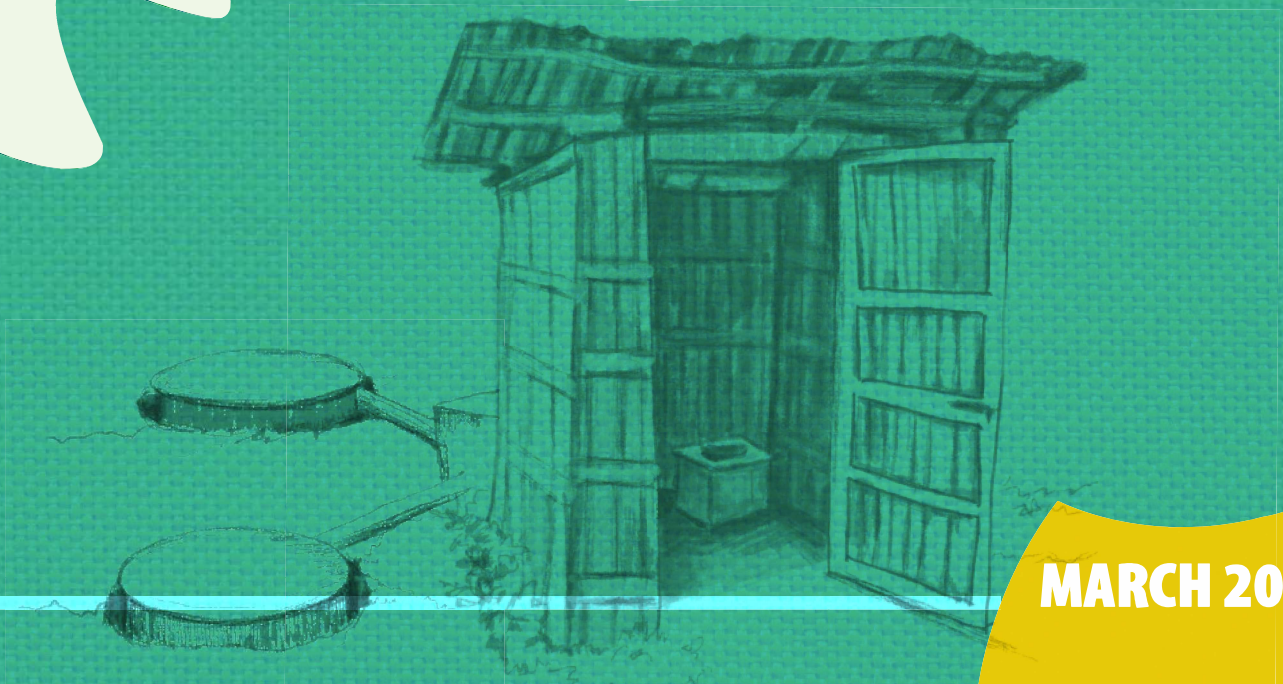




# IMPLEMENTATION OF INSTITUTIONAL AND REGULATORY FRAMEWORK FOR FECAL SLUDGE MANAGEMENT

## NATIONAL ACTION PLAN

### RURAL AREAS



**MARCH 2020**

---

Implementation of Institutional and Regulatory  
Framework (IRF) for Fecal Sludge Management (FSM)

# **NATIONAL ACTION PLAN (NAP)**

(Rural Areas)

---

## **Published by**

Policy Support Branch (PSB)

Local Government Division

Ministry of Local Government, Rural Development and Co-operatives

Government of the People's Republic of Bangladesh

## **Supported by**

Technical: ITN-BUET

Financial: United Nation's Children Fund (UNICEF)

Design and Layout: Practical Action

## **Published in**

March 2020

## **Prepared by**

Working Committee formed by the Local Government Division,

Ministry of Local Government, Rural Development and Co-operatives

## **Copyright**

Local Government Division

Ministry of Local Government, Rural Development and Co-operatives,

Government of the People's Republic of Bangladesh

This publication or any part of it can be reproduced in any form  
with due acknowledgement.



# **IMPLEMENTATION OF INSTITUTIONAL AND REGULATORY FRAMEWORK FOR FECAL SLUDGE MANAGEMENT**

## **NATIONAL ACTION PLAN**

**RURAL AREAS**

**MARCH 2020**





## Minister

Ministry of Local Government, Rural Development & Cooperatives  
Government of the People's Republic of Bangladesh

### Message

I am delighted that the Policy Support Branch (PSB) of the Local Government Division has prepared the National Action Plan for implementation of Institutional and Regulatory Framework for Faecal Sludge Management for the water supply and sanitation sector in Bangladesh separately for Rural areas, Paurashava, City Corporation and Megacity Dhaka.

The achievement of sustainable development goals (SDGs) is a priority function of our government. In line with this objective, this initiative of Local Government Division is undoubtedly a commendable initiative.

The document "Institutional and Regulatory Framework for Faecal Sludge Management" provides a guideline for implementing faecal sludge management. It builds upon a comprehensive framework for consistent and harmonized interventions maintaining pace towards faecal sludge management. I believe, this will play a significant role in attaining sustainable development goal (SDG 6.2).

We have achieved a great success for last few decades to reduce the rate of open defecation. Now the need is to make faecal sludge management more consolidated and effective through the National Action Plan. The National Action Plan provides guideline for local government institutions about their roles and responsibilities. I urge these LGLs for effective and timely implementation of these national action plans for implementing Institutional and Regulatory Framework for Faecal Sludge Management.

I am pleased that the development process of this document adopted a wide range of participation. Stakeholders from grassroots level up to policy planners have active involvement. Opinion at all levels were considered with due importance. It is encouraging that the development process of this document added a new dimension which emphasizes government's aspiration of establishing accountability and good governance and hopefully will carry forward the principle of transparency and accountability.

I convey my profound thanks to all those for their contributions in its preparation, particularly the members of the working committee, various sub-committees, technical support committee, LCG sub-group, sector professionals, national forum for water supply and sanitation, and on top of all, the concerned officials of the Local Government Division.

We are entrusted with the responsibility to attain SDG-6 and concerned vision of honourable Prime Minister. I hope all including our LGLs, development partners, NGOs, civil societies and social media will work together with a concerted effort to implement Institutional and Regulatory Framework for Faecal Sludge Management and provide their overall support for progressing Bangladesh in hygienic management of the faecal sludge. We will be able to ensure sustainable FSM services through improved faecal sludge management which will help to achieve SDG 6.2, I firmly believe.

Joy Bangla, Joy Bangabandhu.

Md. Tazul Islam, MP



## Senior Secretary

Local Government Division  
Ministry of Local Government, Rural Development & Cooperatives  
Government of the People's Republic of Bangladesh

### Message

Despite multifarious challenges as developing country, the enormous progress in our social and economic sectors is well-acquainted and universally recognized. Specially, our achievement is envious in the water and sanitation sector. Recently, we have attained to a glorious status of middle-income country, which was possible for our national integrity, farsighted plan and candid leadership of our Prime Minister, the Head of the Government.

Our success in overcoming the problems in sanitation is a good example. While 34% of population practiced open defecation in 1990, the reduction of the rate to almost zero is a unique example. It is because of the concerted effort of the government, development partner, NGOs and people in general this unique achievement was resulted.

Despite this success of reducing open defecation to zero, our achievement is now threatened by disposal of faecal sludge in environment. In order to ensure hygienic management of faecal sludge, the Local Government Division initiated preparation of "Institutional and Regulatory Framework for Faecal Sludge Management". The regulatory framework was prepared separately for Rural areas, Municipalities, City Corporations and Dhaka Megacity. Furthermore, several workshops were organized in favour of Local Government Division to orient all concerned about these regulatory frameworks. I think the preparation of National action Plan for Institutional and Regulatory Framework of Faecal Sludge Management is a timely right action.

I firmly believe that this National Action Plan will bring us one step forward towards achievement of SDG-6. This action plan will play a key role for achieving safely managed sanitation towards pathway to attain middle income country to developed country according to vision 2021 and vision 2041 of the government. This National Action Plan will help local government institutions to perform effectively.

I convey my sincere thanks to Additional Secretary (Water Supply), Additional Secretary (Policy Support) and all other concerned officials of Local Government Division for their pioneering and proactive role and continuous support towards the preparation of National Action Plan for Institutional and Regulatory Framework for Faecal Sludge Management.

At the end, I would like to present this 'National Action Plan' for Institutional and Regulatory Framework of Faecal Sludge Management to all the stakeholders related to this National Action Plan so that they can undertake effective program for improved sanitation in the country. I am confident that this initiative will greatly help in achieving the SDG 6.2.

Helal Uddin Ahmed





## Additional Secretary (Water Supply)

Local Government Division

Ministry of Local Government, Rural Development & Cooperatives

Government of the People's Republic of Bangladesh

### Foreword

The Institutional and Regulatory Framework for Faecal Sludge Management has already been published by the Local Government Division of the Ministry of Local Government, Rural Development and Cooperatives. To implement this Regulatory Framework as per sector demand, the preparation of a National Action Plan is a milestone for the water supply and sanitation sector of the country. I believe that this Action Plan will play a key role to achieve SDG 6.2

We have many successes in the water supply and sanitation sector. The hygienic management of faecal sludge is still a great challenge for us. To face this challenge, the initiative for preparation of the National Action Plan for implementation of the Institutional and Regulatory Framework for Faecal Sludge Management is indeed an effective and timely step.

I would like to express my profound regards to Mr. Md. Tajul Islam MP Honouable Minister, Ministry of Local Government, Rural Development & Co-operatives who's progressive leadership and directives inspire us to finish the job properly and in time.

I would like to express my sincere gratitude and profound regard to Mr. Helal Uddin Ahmed, Senior Secretary to the Local Government Division for his kind advice and cooperation for printing and publication of this national action plan.

I am thankful to Professor Dr. Muhammad Ashraf Ali, Director and all the staffs of ITN-BUET for their dedicated and untiring effort for accomplishing this specialized work.

I would like to express my gratitude to Professor Dr. Md. Mujibur Rahman, the sector specialist for his contribution, cordial advice and active support for successful implementation of this initiative.

I also express my heartfelt gratitude to the members of the working committee for preparation of National Action Plan for implementation of Institutional and Regulatory Framework for Faecal Sludge Management. I also take this opportunity to convey my thanks to all the concerned Ministries, DPHE, WASAs, Municipalities, City Corporations, UNICEF and other development partners, NGOs and sector professionals for their contribution to this work.

It will remain incomplete if I forget to pay gratitude and thanks to Mr. Abdur Rauf, the Additional Secretary and former in-charge of the Policy Support Branch and Kazi Ashraf Uddin, the additional Secretary and present in-charge of Policy Support Branch who took their utmost effort to finish this work.

I hope this National Action Plan for implementation of Institutional and Regulatory Framework for Faecal Sludge Management will be able to play a vibrant role to achieve SDG 6.2 and carry on the progress of improved sanitation in the country.

Md. Zahirul Islam

## Acknowledgement

The Institutional and Regulatory Framework for Fecal Sludge Management (IRF-FSM) in Bangladesh was approved on November 4, 2017 by the Ministry of Local Government, Rural Development and Cooperatives (MoLGRD&C). Subsequently, a Working Committee was formed in June, 2018 by the Local Government Division (LGD), MoLGRD&C, comprising members from relevant government agencies, academia, I/NGOs, development partners and private organizations to develop a “National Action Plan (NAP)” for implementation of the IRF-FSM.

The NAP specifies the roles and responsibilities of stakeholders at different levels (e.g., national/local) for specific actions with set milestones to be achieved within a given period of time for the safe management of fecal sludge in the country. The NAP also ensures coordination among the stakeholders for effective implementation of current and future FSM initiatives for long-term operational sustainability. Since there are four frameworks for four different Local Government Institutions (LGIs), i.e., City Corporations, Paurashavas, rural areas and the mega-city Dhaka; there are also separate National Action Plans for these LGIs.

The NAPs have been developed with the objective of rapid implementation of FSM services throughout the country by 2030. The NAPs are based on the information of the current status of FSM implementation and infrastructure across the country. It has been a privilege of ITN-BUET to be able to play a leadership role in the development of both the IRF-FSM and the National Action Plans for implementation of IRF-FSM, in collaboration with the Policy Support Branch (PSB) of the LGD and engaging with all the relevant actors and stakeholders in the country.

ITN-BUET acknowledges the leadership role of Mr. Helal Uddin Ahmed, Senior Secretary of Local Government Division of Ministry of LGRD&C for his strong interest on this subject matter. A special thanks also goes to Mr. Md. Zahirul Islam, Additional Secretary (Water Supply Wing) of LGD who served as Chairperson of the Working Committee, for his valuable support and his strategic guidance to finalize the NAPs.

This endeavor would not have been successful without the strong support of the PSB of the LGD. ITN-BUET gratefully acknowledges the contribution and deep engagement of Dr. Md. Mujibur Rahman, the Co-chair of the Working Committee, in developing the NAPs. We are obliged to the representatives of academic and research institutions, development partners and Banks, national and international NGOs, private entrepreneurs and individual experts who have contributed immensely through their precious time, expertise, wisdom and insights in developing this framework.

We sincerely hope that the NAPs would help implementation of safely managed sanitation services throughout the country by 2030, and thus contribute to fulfilling Bangladesh Government’s strong commitment in achieving SDG Target 6.2 by 2030.



**Dr. Muhammad Ashraf Ali**  
Professor, Civil Engineering, BUET



# CONTENTS

Abbreviations and Acronyms	viii
Executive Summary	1
1. Introduction	2
2. IRF-FSM Implementation	5
2.1 Responsibilities	5
2.2 Containment	8
2.3 Collection and transportation	8
2.4 Treatment facility	9
2.5 Disposal/end-use	9
2.6 Capacity building	9
2.6.1 National level	9
2.6.2 Upazila and Union level	11
2.7 Awareness building	11
2.8 Technical assistance	12
2.9 Funding support	12
3. National Level Action	13
4. Upazila and Union Level Action	17
5. Tentative Budget	21
5.1 Tentative budget for national level action plan	21
5.2 Tentative budget for Upazila and Union level action plan	22



# ABBREVIATIONS AND ACRONYMS

BARC	Bangladesh Agricultural Research Council
BARI	Bangladesh Agricultural Research Institute
BCC	Behavior Change Communication
BNBC	Bangladesh National Building Code
BRRI	Bangladesh Rice Research Institute
BRTA	Bangladesh Road Transport Authority
BUET	Bangladesh University of Engineering and Technology
CBO	Community Based Organization
CWIS	City Wide Inclusive Sanitation
DAE	Department of Agricultural Extension
DoE	Department of Environment
DPHE	Department of Public Health Engineering
ECR, 1997	The Environment Conservation Rules, 1997
FS	Fecal Sludge
FSM	Fecal Sludge Management
FSTP	Fecal Sludge Treatment Plant
GoB	Government of Bangladesh
ICDDR,B	International Centre for Diarrhoeal Disease and Research, Bangladesh
IEC	Information, Education and Communication
IEDCR	Institute of Epidemiology, Disease Control and Research
I/NGO	International and National NGO
IRF	Institutional and Regulatory Framework
ITN	International Training Network
IWMI	International Water Management Institute
LGD	Local Government Division
LGED	Local Government Engineering Department
LGI	Local Government Institute
MAB	Municipal Association of Bangladesh
MoA	Ministry of Agriculture
MoEFCC	Ministry of Environment, Forest and Climate Change
MoLGRD&C	Ministry of Local Government, Rural Development and Co-operatives
NAP	National Action Plan
NBR	National Board of Revenue
NFWSS	National Forum for Water Supply and Sanitation
NGO	Non-Government Organization
NILG	National Institute of Local Government
ODF	Open Defecation Free
OHS	Occupational Health and Safety
PSB	Policy Support Branch
RDA	Rural Development Authority
SDG	Sustainable Development Goals
SME	Small and Medium-sized Enterprises
SRDI	Soil Resource Development Institute
SREDA	Sustainable and Renewable Energy Development Authority
UGIIP-III	Urban Governance and Infrastructure Improvement Project - III
WASH	Water, Sanitation and Hygiene
WB	World Bank
WC	Working Committee
WEDC	Water, Engineering and Development Centre, Loughborough University

# EXECUTIVE SUMMARY

The National Forum for Water Supply and Sanitation, in its 16th meeting, took a decision to develop the Institutional and Regulatory Framework for Fecal Sludge Management (IRF-FSM) in Bangladesh. This framework was approved on November 4, 2017 by the Ministry of LGRD&C. The IRF-FSM has been developed separately for City Corporations, Municipalities (Paurashavas), Rural Areas, and the Mega-City of Dhaka – laying out the institutional roles and responsibilities to implement FSM services in these different contexts.

Subsequently, a Working Committee (WC) was formed in June, 2018 by the LGD, MoLGRD&C, comprising members from relevant government agencies, academia, I/NGOs, development partners and private organizations to develop a “National Action Plan (NAP)” for implementation of the IRF-FSM. This NAP for Rural IRF-FSM is a product of this initiative.

The NAP for Rural Areas has been developed with an objective of rapid implementation of the IRF-FSM in all Rural Areas of Bangladesh by 2030. In this NAP, “Rural Areas” comprise all areas outside Mega-City Dhaka, City Corporations and Paurashavas (Municipalities). The NAP for Rural Areas includes specific actions for relevant stakeholders, both at National and Upazila/Union levels, where the institutional roles and responsibilities are assigned based primarily on current roles played by different Ministries and Departments of Government, as well as by the development partners/banks, I/NGOS and other stakeholders.

The national level action in the NAP includes the responsibilities of national level institutions, with special focus on facilitating the Upazila and Union Parishads to undertake all required actions at field level to ensure FSM infrastructures and services are in place within specified time according to the IRF-FSM. The Action Plan also includes specific responsibilities of Upazila and Union Parishads for implementation of FSM services.

The Rural Areas are grouped under two different clusters based on their potential to become urbanized in near future. The timeline in the NAP has been flagged every three years, so that the NAP could be reviewed and revised as per the milestone achievement and available support.

Both national and local (Upazila/Union) level activities included in the NAP need substantial support from the Government and the development partners to implement FSM in all Rural Areas by 2030. Implementation of the NAP would also require funding support both at local and national levels. The requirement will depend on progress of implementation, and may have to be adjusted considering the overall progress of the proposed actions. In the NAP, a tentative budget for the first three years (2019-2021) for national level actions, and twelve years (2019-2030) for Upazila/Union level actions has been proposed.

The Local Government Division, with support from national level committees, would review the progress of the NAP regularly and revise the NAP as required to achieve the overarching goal of IRF-FSM. The budget should also be appraised by national level committees in consultation with national and local level stakeholders to ensure successful implementation of the IRF-FSM.

The National Forum for Water Supply and Sanitation, in its 16th meeting, took a decision to develop the Institutional and Regulatory Framework for Fecal Sludge Management (IRF-FSM) in Bangladesh. The Policy Support Branch (PSB) of Local Government Division (LGD) of the Ministry of Local Government, Rural Development and Cooperatives (MoLGRD&C) in partnership with the International Training Network of the Bangladesh University of Engineering & Technology (ITN-BUET) led the initiative with the support from sector stakeholders. This framework was approved on November 4, 2017 by the Ministry of LGRD&C. The Institutional and Regulatory Framework for FSM, which focuses on ensuring safe sanitation services in Bangladesh, aligned with SDG target 6.2, has been developed separately for City Corporations, Paurashavas, Rural Areas and the Mega-City of Dhaka – laying out the institutional roles and responsibilities to implement FSM services in these different contexts.

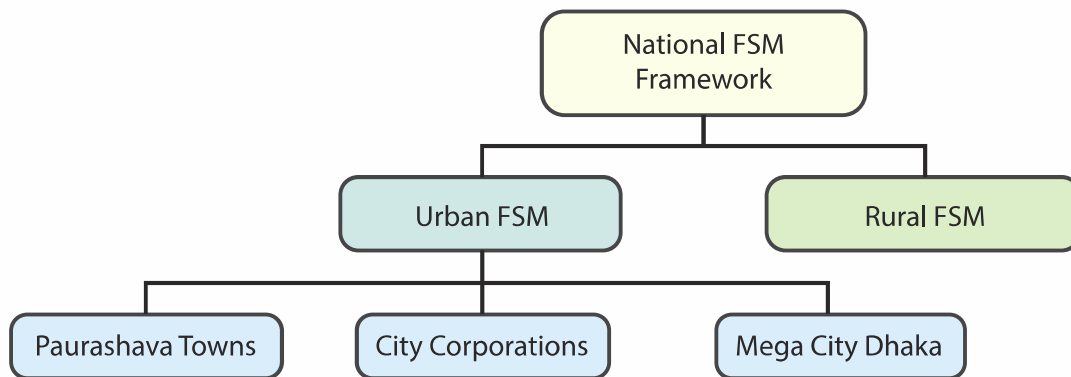


Figure 1: National FSM framework for different types of areas in Bangladesh

Subsequently, a Working Committee was formed in June, 2018 by the LGD, MoLGRD&C, comprising members from relevant government agencies, academia, I/NGOS, development partners and private organizations to develop a “National Action Plan (NAP)” for implementation of the IRF-FSM.

It is very important to develop the NAP that clearly specifies the roles and responsibilities of stakeholders at different levels (e.g., national/local) for implementing/undertaking specific actions with set milestones to be achieved within a given period of time. NAP also ensures coordination among the stakeholders for effective implementation of current and future FSM initiatives for long-term operational sustainability. Since there are different frameworks for different Local Government Institutions, there is also a need for separate National Action Plans for these institutions. This document presents the NAP for implementation of IRF-FSM for Rural Areas.

The NAP for Rural Areas has been developed with an objective of rapid implementation of FSM in all Rural Areas under 64 districts by 2030. The specific objectives of the IRF-FSM for Rural Areas are:

- (a) Identify ways and means of safe management of fecal sludge in the Rural Areas; and
- (b) Define specific roles and responsibilities of various institutions and stakeholders, particularly the Union Parishads and Upazila Parishads, for effective management of fecal sludge.

The institutional roles and responsibilities specified in the NAP are based primarily on the provisions of the Local Government (Union Parishad) Act, 2009 and Upazila Parishad Act, 1998 (amended in 2009 and 2011), which guide and regulate the roles and responsibilities of all Union and Upazila Parishads. In addition, Government Circular on Union Development Coordination Committee on 21 January 2013 (amended on 14 March 2013), has been considered in the development of the NAP. Moreover, the functions of existing Upazila/Union/Ward WATSAN Committee have also been reviewed.

In this NAP, “Rural Areas” comprise all areas outside Mega-City Dhaka, City Corporations and Paurashavas (Municipalities), and these Rural Areas are classified into two clusters, based on their potential to become urbanized in future:

- Cluster A: “Non-Paurashava towns, growth centers”
- Cluster B: Remaining “Rural Areas”

In the present context of typical Rural Areas, the immediate needs are: (a) raising awareness of safely managed sanitation; (b) promoting safe emptying practices (e.g., use of safety gear by emptiers and use of mechanical means, such as pumps); (c) promoting safe disposal (e.g., through treatment/trenching, safe burial) of emptied fecal sludge; and (d) promoting technologies (e.g., twin pit latrines, single pit latrines with safe burial and other emerging options) that could eliminate/reduce the need of unsafe emptying. It may take some time to introduce FSM services such as organized collection, transportation and treatment of fecal sludge in most rural areas. However, certain components of FSM services including safe emptying and disposal/burial is urgently needed.

The technical approaches to be followed for management of fecal sludge in the two clusters of Rural Areas may vary depending on containment type, transportation facilities and treatment methods. Table 1 presents the proposed technical approach at different steps of service chain for these two clusters.

Table 1: Technical approaches for two Clusters in rural areas

Component	Cluster A		Cluster B	
Containment	Septic tank	<ul style="list-style-type: none"><li>• Off-set alternating twin pit pour flush latrine/other emerging options</li><li>• Single pit latrine with safe burial</li></ul>	Septic tank	<ul style="list-style-type: none"><li>• Off-set alternating twin pit pour flush latrine/other emerging options</li><li>• Single pit latrine with safe burial</li></ul>
Emptying	Desludging truck, portable emptying equipment with closed container	<ul style="list-style-type: none"><li>• For single pit toilets, regular and safe desludging followed by safe disposal/burial</li></ul>	Portable equipment with closed container	<ul style="list-style-type: none"><li>• For single pit toilets, regular and safe desludging followed by safe disposal/burial</li></ul>
Transportation	Small truck, small van		Small van	
Treatment	Decentralized fecal sludge treatment system, DEWATS or safe burial		Safely buried	
End use		Fertilizer/ soil conditioner/ other safe uses following safe removal		

With the objective of gradual implementation of FSM in all Rural Areas by 2030, milestones have been set for actions under these two clusters for implementing the NAP, where the timeline has been flagged every three-year. The NAP could be reviewed and revised as per the milestone achievement. The proposed milestones for implementing the National Action Plan for Rural Areas are presented in Table 2.

Table 2: Target milestones for two clusters at Rural Areas

Cluster	Type of Rural Areas	Milestones			
		(2019-2021)	(2022-2024)	(2025-2027)	(2028-2030)
A	Non-Paurashava towns, growth centers	<ul style="list-style-type: none"> <li>Awareness campaign for safely managed sanitation</li> <li>Capacity building</li> <li>Promoting use of offset alternating twin-pit latrines, single pit latrine with safe burial or other emerging technologies</li> <li>Promoting and introducing use of mechanical desludging, where appropriate, confirming OHS</li> <li>Ensuring safe disposal/burial of FS</li> </ul>	<ul style="list-style-type: none"> <li>Continued awareness campaign</li> <li>Continued capacity building</li> <li>Promoting use of offset alternating twin-pit latrines or other suitable technologies</li> <li>Ensuring mechanical desludging confirming OHS</li> <li>Introducing decentralized fecal sludge treatment plant, DEWATS, where appropriate</li> <li>Ensuring safe disposal/burial of FS</li> </ul>	<ul style="list-style-type: none"> <li>FSM Service continued and continually updated</li> <li>Ensuring use of offset alternating twin-pit latrines or other suitable technologies by all</li> <li>Ensuring safe burial/treatment/disposal of FS</li> </ul>	<ul style="list-style-type: none"> <li>FSM Service continued and continually updated</li> </ul>
	Remaining "Rural Areas"	<ul style="list-style-type: none"> <li>Awareness campaign for safely managed sanitation</li> <li>Capacity building</li> <li>Promoting use of offset alternating twin-pit latrines, single pit latrine with safe burial or other emerging technologies</li> <li>Promoting and introducing use of mechanical desludging, where appropriate, confirming OHS</li> <li>Ensuring safe burial/treatment/ disposal of FS</li> </ul>	<ul style="list-style-type: none"> <li>Continued awareness campaign</li> <li>Continued capacity building</li> <li>Promoting use of offset alternating twin-pit latrines or other suitable technologies</li> <li>Promoting and introducing use of mechanical desludging, where appropriate, confirming OHS</li> <li>Ensuring safe burial/treatment/disposal of FS</li> </ul>	<ul style="list-style-type: none"> <li>FSM Service continued and continually updated</li> <li>Ensuring use of offset alternating twin-pit latrines or other suitable technologies by all</li> <li>Ensuring mechanical desludging confirming OHS</li> <li>Ensuring safe burial/treatment/disposal of FS</li> </ul>	<ul style="list-style-type: none"> <li>FSM Service continued and continually updated</li> <li>Ensuring safe disposal/treatment/burial of FS</li> </ul>



The primary objective of the National Action Plan (NAP) for Rural Areas is to facilitate implementation of FSM services in all Rural Areas throughout Bangladesh in phases. Only on-site sanitation facilities and areas served by such facilities would fall under the purview of the NAP for Rural Areas. In this chapter, the major actions needed for implementation of NAP for IRF-FSM, at both national and Union levels, in the Rural Areas are listed.

## 2.1 Responsibilities

There is lack of awareness among concerned stakeholders regarding the adverse impacts of unsafe pit emptying practices, indiscriminate disposal of emptied sludge, and availability of technological options (e.g., alternating twin pit latrines) that could eliminate/reduce problems associated with fecal sludge. Union Parishads (UP) have limited capacity, both in terms of resources and trained work force, for creating awareness about FSM and supporting/promoting safe emptying and disposal. Nevertheless, as a continuation of their leading roles in achieving ODF status, Union Parishads together with DPHE, NGOs and other stakeholders could play key role in ensuring proper management of fecal sludge in Rural Areas.

According to existing rules, regulations and GoB circulars, Upazila Parishads, and Ward Committees have been given important responsibilities with regard to water supply and sanitation. According to Sub-section (1) of Section 47 of the Local Government (Union Parishad) Act, 2009 (amended in 2010) (hereinafter referred to as “UP Act, 2009”), Union Parishads are responsible for improvement and preservation of the environment. According to Section 45 of the UP Act, Union Parishads shall form a number of Standing Committees including one on “Sanitation, Water Supply and Drainage”, to effectively perform its responsibilities. Although the term “fecal sludge” is not specifically mentioned in the UP Act 2009, it is clear that the responsibility of overall management of sanitation system including “fecal sludge” generated in sanitation facilities lies with the UPs and its Ward Committees, Upazila Parishads, and the respective WATSAN Committees.

As per the GoB circular on Union Development Coordination Committee (UDCC) on 21 January 2013 (amended on 14 March 2013), the UDCC will be responsible for planning, implementation and coordination of all socio-economic development of the Union Parishad. In order to implement any project under the revenue budget or to finalize its activities, a committee will be formed comprising Union Parishad Chairman, Ward Members, Secretary and Heads of relevant departments. This circular suggests allocation of minimum 15% to maximum 20% of project budget for water supply, latrines, sanitation, etc.

Besides, Union-level WATSAN Committees (formed through a GoB circular in 2007) have been given the responsibility of performing a range of activities in the WASH sector, including participating as well as supporting DPHE in raising awareness on WASH; coordinating the activities of Union Parishad, Ward Committees, NGOs and others; implementing water supply and sanitation related components of projects being implemented under the LGD; and formulation and implementation of water supply and sanitation related projects. Upazila-level WATSAN Committees are responsible for reviewing activities of Union-level WATSAN Committees and providing them advice and support; supporting DPHE in collecting WASH related data and information; and undertaking and executing water supply and sanitation projects.

In order to facilitate implementation of IRF-FSM, the Union Parishad must form a Standing Committee on “Sanitation, Water Supply and Drainage” (if it has not been formed already) to oversee the activities related to planning and implementation of FSM services. In addition, the Union Parishad Standing Committee, depending on need and availability, could co-opt a relevant expert in the Committee. When a Union Parishad introduces the entire FSM service chain (including collection, transportation and treatment of fecal sludge), it may form “joint committee” with a nearby Paurashava(s) where such services are in place, in order to facilitate planning and implementation of FSM services based on the experience of the Paurashava(s). The UP shall also initiate inclusive FSM planning and implementation/coordination modality among the government agencies, I/NGOs, community groups and the private sector.

While the Union Parishad Committees will focus on implementation of FSM only in the respective Unions, the Upazila Parishad level committees will have jurisdiction over all areas within the Upazila boundary except Paurashava, City Corporation and Mega-City Dhaka. However, coordination needed among the Union level committees (Union Parishad Standing Committee, Union Parishad WATSAN Committee and Ward Level WATSAN Committee) and Upazila level committees (Upazila Parishad WATSAN Committee) will be facilitated by a National Level Coordination Committee.

At the national level, the Local Government Division, through its line agencies [Department of Public Health Engineering (DPHE), Local Government Engineering Department (LGED), National Institute of Local Government (NILG)], would play supporting roles for capacity building of the Upazilas and Union Parishads. In addition, the National Forum for Water Supply and Sanitation (NFWSS), relevant ministries would support the Upazila and Union Parishads to secure fund, provide technical support through respective line agencies (DPHE and LGED), and ensure enforcement of laws, policies, strategies and guidelines for ensuring implementation of FSM by 2030 in Rural Areas.

A national level FSM Coordination Committee will be formed with the responsibility to coordinate the implementation of the NAP for FSM, support the Union Parishads to implement entire FSM system, capacity building, awareness raising and regular monitoring. The FSM Coordination Committee will facilitate and liaison with the NFWSS and FSM Support Cell at national level and will report to Local Government Division (LGD) and will share progress with NFWSS on a regular basis. Female participation in the Committees at all levels should be encouraged and ensured.

The FSM Support Cell at the national level will be responsible for providing adequate support to national level FSM Coordination Committee, and other committees engaged at Upazila and Union levels for proper implementation of FSM. The activities within the purview of the FSM Support Cell would include maintaining liaison with different relevant Ministries and exploring financial support from Government as well as the development partners, supporting FSM Coordination Committee, arranging national and local level programs according to this NAP and providing technical support to FSM implementing authorities (Union Parishads, DPHE, LGED and I/NGOs).



Figure 2: Organogram of different committees that will help implementation of IRF for FSM in Rural Areas

During the implementation of FSM in Rural Areas, the Ministry of Local Government, Rural Development & Co-operative will lead the process with support from the following Ministries:

1. Ministry of Local Government, Rural Development and Cooperatives (MoLGRDC):  
Lead Ministry
2. Ministry of Environment, Forest and Climate Change
3. Ministry of Health and Family Welfare
4. Ministry of Agriculture
5. Ministry of Fisheries and Livestock
6. Ministry of Finance
7. Ministry of Housing and Public Works
8. Ministry of Water Resources
9. Ministry of Education
10. Ministry of Primary and Mass Education
11. Ministry of Information
12. Ministry of Industries
13. Ministry of Shipping
14. Ministry of Railways
15. Ministry of Road Transport and Bridges
16. Ministry of Energy and Mineral Resources
17. Ministry of Land
18. Ministry of Home Affairs
19. Ministry of Law, Justice and Parliamentary Affairs
20. Ministry of Women and Children Affairs
21. Ministry of Religious Affairs
22. Ministry of Labour and Employment

At the national level, representatives from the following institutions would participate in capacity building to provide support to fill the knowledge gaps, technical assistance, training, R&D support, quality assurance of processes and products (e.g., compost) in the FSM service chain:

- Relevant Ministries and line agencies
- ITN-BUET, relevant universities, research organizations
- DoE, DAE, BARI, BRRI, BARC, SRDI, IEDCR, ICDDR, SREDA
- DPHE, LGED, RDA, NILG
- International research/ training organizations
- Development partners
- I/NGOs
- Private Sector
- National and International Networks

In addition, representatives from the following institutions would participate in awareness building to support/awareness/campaign/promote/private/sector/participation/demonstration of FSM operational/ business models, performance monitoring, technical assistance, R&D support and funding:

- Relevant Ministries and line agencies
- Development partners
- I/NGOs
- Civil Society Organizations, CBOs
- Research organizations/universities
- DPHE, LGED, RDA, NILG
- Print, electronic and social media
- Private sector
- National level knowledge and advocacy platforms

## 2.2 Containment

As per the national standards/guidelines for containment (e.g., septic tanks, pit latrines), the Union Parishads will check and approve location, layout and design for all new/existing constructions, and will put in place sanctions/punishments for unsafe containments. In case of existing facilities, the Union Parishad will serve notice to the owners of premises for lack of or inadequate sanitation facility, or to remove inappropriate sanitation facilities. Also Union Parishad should take actions to build capacity of masons, contractors and others for design and construction of appropriate containment, for which the Union Parishad may engage experts. With support from Upazila Parishad, the Union Parishad shall collaborate with DPHE (for technical assistance), I/NGOs and the private sector for organizing training of local masons on design and construction of toilets.

Where conditions (e.g., availability of adequate land) permit, the Union Parishad and Ward Committees shall encourage use of offset alternating twin pit pour-flush toilets (or other emerging technologies that reduce handling of fecal sludge) that provide a long-term solution to the fecal sludge management problem.

## 2.3 Collection and transportation

The Union Parishads, with support from Ward Committees and WATSAN Committees and Upazila Sanitary Inspector of Upazila Health Complex (under Ministry of Health and Family Welfare), shall carry out inspection and make sure that fecal matter/urine/domestic sewage are not stored (or allowed to flow) on street or open place, and are not discharged in drain/canal/sewer, since these activities are treated as punishable offence according to the provisions of Schedule 5 (Sections 6, 19) of UP Act, 2009.

The Union Parishad, with support from MoLGRD&C, development partners and I/NGOs, and/or its own revenue budget or any other funding source, will purchase safety gears and pumps (if needed) for safe emptying of sanitation facilities. The Union Parishad shall facilitate availability of safety gear/PPE (e.g., boots, masks) and equipment (e.g., suitable pumps) for safe emptying of pits/septic tanks.

The Union Parishad, through its Ward and WATSAN Committees, shall make sure that the emptied fecal sludge is transported for disposal/burying, the transportation is carried out in close containers, and that the emptied fecal sludge is never disposed of in open space or water bodies or storm drains or sewers.

The Union Parishad will create a pool of pit emptiers comprising members of traditional pit emptier groups or any other interested individuals/groups (e.g., SME) by building their capacity (knowledge, skills) for improved service delivery. The Union Parishad will make provision for sanctions/ punishment for unauthorized disposal of collected fecal sludge (e.g., in open space, water bodies, storm sewers/drains). The Union Parishad will initiate a process for providing license to private emptying service providers, individual/company/association. The Union Parishad may extend their emptying and transportation support to the nearby Union Parishad(s) and earn revenues, if they are requested to share the service.

In order to ensure proper and timely emptying of onsite sanitation facilities, the Union Parishad through its Ward/WATSAN Committees will gradually develop a database of all sanitation facilities within areas of its jurisdiction, along with probable emptying frequency of these facilities. At the same time, these Committees shall keep records of households/institutions availing/practicing safe emptying and disposal of fecal sludge.

## 2.4 Treatment facility

In Rural Areas, for containment types other than offset alternating twin-pit pour flush latrines and where any fecal sludge treatment facility is not available, fecal sludge emptied from onsite sanitation facilities shall be disposed of by burying it in a pit within household premises or in a land/areas designated by the Union Parishad for production of “compost”. Emptied fecal sludge may also be transported to the nearest treatment facility (e.g., in nearby Union Parishad, Paurashava /City Corporation) if such facilities are available and such transport is feasible, or utilized in other resource recovery facilities (e.g., biogas).

## 2.5 Disposal/end-use

The Union Parishad, with support from Ward Committees and WATSAN Committees and Upazila Sanitary Inspector, shall carry out inspection and make sure that fecal matter emptied from sanitation facilities are properly disposed of (e.g., buried in soil) so that these do not pollute the environment and endanger public health. In the absence of a fecal sludge treatment facility, fecal sludge emptied from onsite sanitation facilities shall be disposed of by burying it in a pit within household premises or in a land/area designated by the Union Parishad. The Union Parishad may engage the private sector/non-government sector for monitoring of pit emptying and fecal sludge disposal practices.

The Union Parishad may seek support from the national level studies conducted on simplifying the procedure for securing license for using/ marketing of compost/ organic fertilizer produced (if any) at fecal sludge treatment facilities.

## 2.6 Capacity building

### 2.6.1 National level

At the national level, as part of building capacity of sector professionals, the following actions should be taken:

- I. Develop a national standard/guideline for implementation of FSM at field level, which will be led by the FSM Coordination Committee.

The development of national guideline for implementation of FSM in Rural Areas will be led by the FSM Coordination Committee. These standards/guidelines will focus on full FSM service chain and refer to different policies, acts (e.g., ECR 1997) and codes (e.g., Bangladesh National Building Code) that can be used as guidance.

The guideline will contain:

- guidelines for proper design and construction of sanitation facilities (offset alternating twin-pit latrines and other suitable options),
- safe emptying for both mechanical and manual methods,
- safe transportation where needed,
- safe burial/disposal of sewage/wastewater/garbage,
- construction, operation and maintenance of fecal sludge treatment facilities, and Decentralized Wastewater Treatment Systems (DEWATS),
- quality control/standardization of treated products/by-products, and
- protocol for securing license for using/marketing of compost/organic fertilizers produced.



The guideline will recommend suitable options for different hydro-geological and hard-to-reach areas as well as considering the climate effect on these areas. Under the leadership of MoLGRD&C and MoEFCC, FSM Coordination Committee, in consultation with all stakeholders shall initiate development of the national standards/guidelines for FSM implementation, where they could seek assistance from the following institutions:

- ITN-BUET, relevant universities, research organizations
- RDA, BARI, BRRI, BARC, SRDI, IEDCR, ICDDR, SREDA
- International research/ training organizations (e.g., Sandec, EAWAG, WEDC, AIT, IHE, IWMI)
- DoE, DPHE, LGED
- Development partners
- I/NGOs
- Private Sector

- II. Develop training modules on FSM implementation in Rural Areas considering each aspect of FSM service chain and the national standards/guidelines. To develop the training modules, relevant national/international research/training organizations/ institutions/ universities, development partners, I/NGOs and the private sector may collaborate with each other and share information.
- III. Arrange training programs for Union Parishad officials and staffs and experts/representatives at local level from different stakeholder organizations. These training programs could be organized by training organizations (e.g., technical and agricultural universities/institutions/centers) under the supervision of LGD, MoLGRD&C.
- IV. The Ministry of LGRD&C will initiate setting up/reforming/strengthening of Upazila/Union/Ward level Committees for effective delivery of FSM services.
- V. LGD will provide necessary support to relevant research organizations (e.g., ITN-BUET, technical and relevant universities) to identify the research needs and conduct researches on different technological options for FSM in the Rural context.
- VI. Conduct “Research on Behaviour Change Communication and Demand Creation for Fecal Sludge Management Service” in selected Unions with support from research organizations. The research can be supported by I/NGOs and development partners, and will be supervised by FSM Coordination Committee. Existing good example on behavior change communication in this regard (if any) could be reviewed and suggested for up scaling (if found appropriate).
- VII. Conduct “Study on Service Delivery Model/Tariff Setting for Mechanical Emptying Service at Union Level” to support different Union Parishads to set pro-poor tariff structure for emptying services. The research can be supported by I/NGOs and development partners, and will be supervised by FSM Coordination Committee.
- VIII. Conduct “Research on Development of Business Model for Delivery of FSM services in Unions”. The research can be supported by I/NGOs and development partners, and will be supervised by FSM Coordination Committee.
- IX. Conduct “Research on Development of Appropriate Technology for Delivery of FSM services in Unions”. The research can be supported by I/NGOs and development partners, and will be supervised by FSM Coordination Committee.
- X. Adopt gender transformative approach to encourage participation of female, disadvantaged groups in Rural Areas in planning, design, implementation and monitoring of FSM policy dialogues and investment programs as well as service chain.



## 2.6.2 Upazila and Union level

At Union level, experts will conduct training programs for LGI officials, mechanical emptying service providers, treatment plant operators (where appropriate) and end-use product makers. LGIs will follow/enforce relevant bylaws and appropriate health and safety guidelines for emptying service. The Upazilas and Union Parishads may take support (financial and technical) from the Ministry of LGRD&C and/or development partners, I/NGOs for the said purpose or could allocate the financial support from revenue budget. The Unions Parishads will set a tariff structure for emptying and transportation service, where emptying service is needed and available, following the recommendations in the national level study. In addition, the Union Parishads may develop an “inclusive business model” for FSM service following the recommendations in the national level study.

## 2.7 Awareness building

Local/national/international NGOs, Community Based Organizations (CBOs), Media (Print, electronic and social), Civil Society Organization (CSO) with support from the Government Ministries and agencies (DPHE, LGED, RDA, NILG), research organizations and development partners, can play key role in raising public awareness on FSM and facilitating partnership among key stakeholders including the private sector. Following activities at the national level can be undertaken for awareness raising and public sensitization on FSM:

- Prioritize and focus on FSM in all the health and WASH related national events.
- Create awareness on FSM along with hygiene education at educational and religious institutes.
- Develop and disseminate audio-visuals for awareness raising on FSM and its importance. The MoLGRDC will lead the process with support from Ministry of Information, and print and electronic media. The social media platform will also be utilized for this purpose.
- Develop and disseminate knowledge, BCC and IEC materials on best practices on FSM in Bangladesh for policy makers, practitioners, service providers and relevant stakeholders.
- Under the leadership of the Union Parishads and support from Upazila Committees, the Ward Committees, and Union Parishad and Ward level WATSAN Committees shall carry out public awareness campaigns on individual responsibility for proper management of sanitation facilities, adverse impacts of unhygienic manual pit emptying practices, and availability of options (e.g., alternating twin pit pour flush latrine and other suitable options, safety gears, pumps, etc.) for safe containment, and emptying of sanitation facilities. With support from Upazila Parishad, the Union Parishad may collaborate with DPHE (primarily for technical assistance), I/NGOs and the private sector in taking up such awareness campaigns.
- Under the leadership of the Union Parishads and support from Upazila Committees, the Ward Committees, and Union Parishad and Ward level WATSAN Committees shall carry out public awareness campaigns on resource recovery potentials (e.g., compost, biogas) of fecal sludge and possible resource recovery options/protocols. With support from Upazila Parishad, the Union Parishad may collaborate with DPHE (primarily for technical assistance), I/NGOs and the private sector in taking up such awareness campaigns.
- The Upazilas and Unions Parishads will carry out awareness raising programs following the recommendation in the study conducted at national level to change behavior of people and increase demand of FSM service and its end-products.

## **2.8 Technical assistance**

Where FSM is in operation, the Upazila and Union Parishads will establish linkages between national/local sanitation experts and the FSM service providers to address the technical issues related to FSM. The LGD through supporting agencies like DPHE, LGED and other facilitating organizations (I/NGOs, development partners) may facilitate Union Parishads, where appropriate, for building this sort of linkage.

At national level, standards/guideline for FSM implementation at field level will be developed and research works on technological and business options could be conducted. The Union Parishads may set standards/guidelines based on the recommendations of these studies.

## **2.9 Funding support**

At the national level, the FSM Coordination Committee may secure funding through Ministries and development partners/banks, I/NGOs where the Union Parishads will provide necessary information and other support. The Union Parishads will also introduce budget allocation in their yearly budget from collected revenue from taxes, for implementation of FSM.

# 3

# NATIONAL LEVEL ACTION

The national level action plan includes the responsibilities that lie with institutions operating at national level with special focus on facilitating the Upazilas and Unions to undertake all required actions at field level to ensure that FSM infrastructure and service delivery mechanisms are in place within the timeframe, according to the IRF-FSM. Table 3 illustrates the proposed actions at national level for implementation of FSM at Union level.

Table 3: National level action plan for implementation of IRF-FSM in Rural Areas

Sl.	Activity	Implementing organization(s)	Timeline											
			2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Form the national level FSM Coordination Committee.	Lead: LGD, MoLGRD&C  Support: DPHE, LGED, relevant ministries and stakeholders												
2	The FSM Coordination Committee will coordinate the responsibilities for proper implementation of the NAP engaging different entities who will be responsible for: (a) supporting the Unions Parishads to implement the entire FSM system, (b) capacity building, and (c) awareness raising  This committee can opt to have separate wings to focus on different responsibilities.	Lead: LGD, MoLGRD&C  Support: relevant ministries and stakeholders												
3	Quarterly meeting of FSM Coordination Committee.	Lead: LGD, MoLGRD&C  Support: DPHE, LGED, RDA, NILG, relevant ministries and stakeholders												
4	Operationalization of the "FSM Support Cell" and regular meeting for overall planning, development, implementation, practice, and monitoring and evaluation of Fecal Sludge Management (FSM) at Union level.	Lead: DPHE  Support: LGD, LGED, RDA, NILG and relevant stakeholders												

Sl.	Activity	Implementing organization(s)	Timeline											
			2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
5	<p>Government order will be in place to form/reform/strengthen committees at Local Government level:</p> <ul style="list-style-type: none"><li>Form/reform/strengthen Upazila level WATSAN Committee comprising members of Union level WATSAN Committees and Union Development Coordination Committee (UDCC). Upazila level WATSAN Committee will be responsible for reviewing activities of Union level WATSAN Committees and providing them advice and support; and support DPHE in collecting FSM related data and information.</li><li>Form/reform/strengthen Union level WATSAN Committee comprising representatives from Ward level WATSAN Committee. This committee will be responsible for implementation of action plan at Union level and will act as coordinating body among the Ward level WATSAN Committees.</li><li>Form/reform/strengthen Ward level WATSAN Committee comprising 3-5 members for supporting Union WATSAN Committee to implement and monitor FSM at Ward level.</li></ul>	<p>Lead: MoLGRD&amp;C</p> <p>Support: LGIs</p>												
6	<p>Monitoring of the WATSAN committees by FSM Coordination Committee.</p>	<p>Lead: LGD</p> <p>Support: LGI, DPHE, RDA, NILG</p>												
7	<p>Resource mobilization planning for capacity building, research and training initiatives on FSM: The LGD of the MoLGRD&amp;C shall coordinate and develop guidelines for capacity building, research and training initiatives on FSM, and facilitate sharing and dissemination of knowledge and information among Upazilas, Unions and other stakeholders.</p>	<p>Lead: LGD, MoLGRD&amp;C</p> <p>Support: DPHE, LGED, RDA, NILG, LGIs</p>												

Sl.	Activity	Implementing organization(s)	Timeline											
			2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
8	<p>Develop national standards/guideline for FSM implementation:</p> <p>A national guideline for implementation of FSM at field level will be developed by the FSM Coordination Committee. MoLGRD&amp;C and MoEFCC, in consultation with all stakeholders shall initiate development of the national standards/guideline for FSM implementation.</p>	<p>Lead: LGD, MoLGRD&amp;C/MoEFCC</p> <p>Support: DPHE, DoE, ITN-BUET, FSM Network</p>												
9	<p>Develop and disseminate capacity-building materials on FSM implementation in Rural Areas considering appropriate technologies for Rural set up.</p>	<p>Lead: ITN-BUET</p> <p>Support: RDA, DPHE, LGIs, and other stakeholders</p>												
10	<p>Build capacity of implementing agencies (DPHE, LGED, Upazila and Union level representatives and officials, pit-emptiers/FSM service providers, etc.) through training courses.</p>	<p>Lead: LGD, MoLGRD&amp;C</p> <p>Support: Dept. of Labor, ITN-BUET, DPHE, RDA, NILG and other stakeholders</p>												
11	<p>Identify research needs and conducting research works on different aspects of FSM for Rural Areas.</p>	<p>National Coordination committee/ FSM Support Cell/ ITN-BUET/academia and research organizations, I/NGOs, development partners</p>												
12	<p>Observe different national events with focus on FSM implementation in Rural Areas.</p>	<p>LGD, MoLGRD&amp;C and other relevant ministries</p>												
13	<p>National level awareness raising by utilizing audio-visuals on FSM and its importance.</p>	<p>LGD, MoLGRD&amp;C/ Ministry of Information and print and electronic media</p>												

Sl.	Activity	Implementing organization(s)	Timeline											
			2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
14	Incorporate FSM related behavior change items along with regular hygiene behavior practice change related topics at educational and religious institutes.	Lead: Ministry of Education, Ministry of Primary and Mass Education  Support: MoLGRD&C, Ministry of Religious Affairs												
15	Adoption of gender transformative approach to encourage participation of female and disadvantaged group in planning, design, implementation and monitoring of FSM policy dialogues and investment programs as well as service delivery and value chain.	LGD, MoLGRD&C/ Ministry of Women and Children Affairs												
16	Document best practices and disseminate among policy makers and practitioners.	LGD, DPHE, LGED, LGIs, RDA, NILG, ITN-BUET, FSM Network and other stakeholders												



# 4

## UPAZILA AND UNION LEVEL ACTION

The Upazila and Union level action plan includes the responsibilities that lie with Upazila and Union Parishads to ensure that FSM infrastructure and service delivery mechanisms are in place within the timeframe, according to the IRF-FSM. Table 4 and Table 5 illustrate the proposed actions at Upazila and Union levels under two different clusters, for implementation of IRF-FSM in Rural Areas

Table 4: Action plan for Unions located in Non-Paurashava towns, growth centers (Cluster A)

Sl.	Activity	Timeline							
		2019	2020	2021	2022	2023	2024	2025-27	2028-30
1	Form/reform/strengthen Upazila, Union and Ward level WATSAN Committees/Standing Committees, Union Development Coordination Committee (UDCC) with special focus on FSM.								
2	Capacity building/refresher training for Upazila, Union and Ward level WATSAN Committees, Standing Committees and LGIs on FSM implementation with support from NILG, RDA, DPHE, LGED, ITN-BUET, I/NGOs, development partners/banks, etc.								
3	Develop and maintain database of all sanitation facilities within areas of Union jurisdiction, along with probable emptying frequency of these facilities.								
4	Create a pool of masons and local sanitation entrepreneurs (LSE) through training, who can construct off-set alternating twin pit pour flush latrines and other appropriate sanitation facilities.								
5	Create a pool of mechanical emptiers comprising members of traditional pit emptier groups through capacity building programs with support from I/NGOs, development partners and other stakeholders.								
6	Draft, approve and implement bylaws to ensure FSM services following guideline for occupational health and safety during emptying/handling of fecal sludge in the Unions.								
7	Approve and enforce sanctions/punishments for inappropriate containments and illegal disposal of fecal waste, as appropriate.  As per the national standards/guidelines for containment (e.g., septic tanks, pit latrines), check location, layout and design for all new/existing constructions, and put in place sanctions/punishments for inappropriate containments.								
8	Dispose FS properly in allocated land/area by digging pits/trench, following OHS guidelines, until 100% coverage of twin pit latrines/other suitable options and treatment facilities.								

Sl.	Activity	Timeline							
		2019	2020	2021	2022	2023	2024	2025-27	2028-30
9	Provide support to poor and disadvantaged households to install off-set alternating twin pit pour flush latrines/other suitable options.								
10	Conduct feasibility study of decentralized fecal sludge treatment plant, and decentralized wastewater treatment system (DEWATS).								
11	Take initiative for purchasing mechanical emptying and transportation vehicle/equipment, and construction of DEWATS/decentralized fecal sludge treatment plant for buildings or densely populated commercial places with support from the Ministry and/or other donors as required.								
12	Procure mechanical emptying and transportation equipment (mechanical desludging truck, etc.) for FSM implementation and construct DEWATS/ fecal sludge treatment plant.								
13	Set a tariff structure for emptying and transportation service (other than twin pit latrines) for consumers who have septic tanks and containments other than twin pit latrines, following the recommendations in the national level study.								
14	Develop a “business model” for FSM service in the Union Parishad: The Union Parishad will adopt a business model for FSM service following the recommendations in the national level study.								
15	Seek approval from the Ministry for allocating budget from revenue for implementation of FSM.								
16	The Union Parishad to increase/introduce separate budget allocation in their yearly budget for implementation of FSM.								
17	Carry out awareness raising programs for promoting safely managed sanitation.								
18	Monitor the O&M of the DEWATS/ fecal sludge treatment plant, and seek support from the Ministry and other stakeholders for modification or upgradation of the treatment process/technology, if required								

Table 5: Action plan for Remaining Rural Areas under Cluster B

Sl.	Activity	Timeline							
		2019	2020	2021	2022	2023	2024	2025-27	2028-30
1	Form/reform/strengthen Upazila, Union and Ward level WATSAN Committees/Standing Committees, Union Development Coordination Committee (UDCC) with special focus on FSM.								
2	Capacity building/refresher training for Upazila, Union and Ward level WATSAN Committees, Standing Committees and LGIs on FSM implementation with support from NILG, RDA, DPHE, LGED, ITN-BUET, I/NGOs, development partners/banks, etc.								
3	Develop and maintain database of all sanitation facilities within areas of Union jurisdiction, along with probable emptying frequency of these facilities.								
4	Create a pool of masons and local sanitation entrepreneurs (LSE) through training, who can construct off-set alternating twin pit pour flush latrines and other appropriate sanitation facilities.								
5	Create a pool of mechanical emptiers comprising members of traditional pit emptier groups through capacity building programs with support from I/NGOs, development partners and other stakeholders.								
6	Draft, approve and implement bylaws to ensure FSM services in the Unions.								
7	Approve and enforce sanctions/punishments for inappropriate containments and illegal disposal of fecal waste:								
	As per the national standards/guidelines for containment (e.g., septic tanks, pit latrines), check location, layout and design for all new/existing constructions, and put in place sanctions/punishments for inappropriate containments.								
8	Dispose FS properly in allocated land/area by digging pits/trench, following OHS guidelines, until 100% coverage of twin pit latrines/other suitable options and treatment facilities.								
9	Provide support to poor and disadvantaged households to install twin pit pour flush latrines/other suitable options.								
10	Procure mechanical emptying (e.g., pumps) and transportation equipment (small vans with proper containment facilities, etc.) for FSM implementation.								
11	Set a tariff structure for emptying and transportation service for consumers who have septic tanks and containments other than twin pit latrines, following the recommendations in the national level study.								

Sl.	Activity	Timeline							
		2019	2020	2021	2022	2023	2024	2025-27	2028-30
12	Seek approval from the Ministry for allocating budget from revenue for FSM implementation.								
13	The Union Parishad to increase/introduce separate budget allocation in their yearly budget for implementation of FSM.								
14	Carry out awareness raising programs for promoting safely managed sanitation.								

Both national and Upazila/Union level action plans need substantial support from Government and development partners to achieve the target of implementing IRF for FSM by 2030 where all Rural Areas will have FSM service running. The financial support needed to implement the IRF will be different for national and Upazila/Union level. The requirement will depend on course of action with time and may have to be adjusted keeping track of overall progress of the proposed actions. Here a tentative budget is proposed based on some rough assumptions that should be reviewed and revised by a technical team before implementation of the proposed actions. It should be noted that the tentative budget for national, and Upazila and Union level does not consider the inflation rate which needs to be taken into account during development of projects in future to implement the actions proposed in the NAP.

## 5.1 Tentative budget for national level action plan

For national level action plan, a tentative budget has been estimated for the first three years starting from 2019 to 2021. It should be noted that the activities that are common for Mega City Dhaka, City Corporations, Paurashavas and Rural Areas (e.g., FSM Coordination Committee meetings, national conference, etc.) have been considered in one of the four action plans only to avoid repetition. The FSM coordination committee can review and revise this budget as needed, and will decide any change in activities that would influence this budget for next years.

Table 6: Tentative budget for national level actions for the period 2019-2021

Sl.	Activity	Unit	Unit Rate (BDT)	Qty.	Total Cost (BDT)
<b>A. Meetings and Capacity Building</b>					
1	Develop national standards/guideline for FSM implementation in Rural Areas	L.S.	10,000,000	-	10,000,000
2	Develop and disseminate capacity building materials on FSM implementation	Yearly	10,000,000	3	30,000,000
3	Build capacity of implementing agencies (DPHE, LGED, Upazila and Union Parishad representatives and officials, mason, LSE, pit-emptiers/FSM service providers, etc.) through training courses	Per Upazila	1,000,000	492	492,000,000
	<b>Sub-Total (Meeting and Capacity Building)</b>				<b>532,000,000</b>
<b>B. Research and Curricula Development</b>					
4	Research on Behavior Change Communication and Demand Creation for FSM, Containment Upgradation and Standardization, Service Delivery Model/ Tariff Setting for Mechanical Emptying Service, Development of Business Model, Development of Appropriate Technology, etc.	L.S.	61,000,000	-	61,000,000
	<b>Sub-total (Research and Curricula Development)</b>				<b>61,000,000</b>
<b>C. Awareness Raising, Knowledge Dissemination &amp; Learning Sharing</b>					
5	Observe different national events with focus on FSM	Yearly	5,000,000	3	15,000,000
6	Document best practices in Rural Areas and disseminate among policy makers and practitioners	Yearly	5,000,000	3	15,000,000
7	Sub-total (Awareness Raising, Knowledge Dissemination & Learning Sharing)				30,000,000
<b>Total (for first three year: 2019-2021)</b>					<b>623,000,000</b>

## 5.2 Tentative budget for Upazila and Union level action plan

For the Upazilas and Unions under Khulna district, a tentative budget has been estimated for the period from 2019 to 2030 (see Table 7) for implementation of Upazila/Union level action plan. However, this should be considered as a template for estimation of budget for Rural Areas, and Upazila and Union Parishads should develop budget for implementation of FSM following this template.

For estimation of budget for Upazilas and Unions under Khulna district, the following were considered: Except the households in Khulna City Corporation and two Paurashavas (Paikgacha and Chalna), total Rural households in Khulna district as of BBS 2011 was = 382,624.

In total there are 69 Unions, among which 8 were considered under Cluster A, where institutions and commercial space density is assumed to be higher than other Rural Areas. Therefore, there are 8 Unions in Cluster A and 61 in Cluster B.

As per HIES, 2016, population under “upper poverty line”<sup>1</sup> in Khulna district was 30.8%.

Table 7: Tentative budget for infrastructure requirement for implementation of FSM in all unions

Sl.	Activity	No. of Upazila /Union	Unit	Unit Rate (BDT)	Total Cost (BDT)
1	<b>Desludging trucks/equipment (500 L, 1,000 L capacity and Portable)</b>				
	Assumptions: At Upazila level: 500 L capacity desludging truck/Upazila = BDT 30 Lac 1,000 L capacity desludging truck/Upazila = BDT 50 Lac Total = BDT 8,000,000 per Upazila				
	At Upazila level, one 500 L and one 1,000 L desludging truck	8	Per Upazila	8,000,000	64,000,000
	Assumption: At Union level: Portable mechanical desludging equipment with van with container = BDT 10 Lac				
	Cluster A (8 Unions) @ 2 nos. of portable mechanical desludging system	8	Per Union	1,000,000	16,000,000
	Cluster B (61 Unions) @ 2 nos. of portable mechanical desludging system	61	Per Union	1,000,000	122,000,000
	<b>Sub-total</b>				<b>202,000,000</b>
2	<b>Off-set twin pit pour flush latrines</b>				
	Assumptions: 30.8% people below “upper poverty line” will receive BDT 3,000 per household for construction of the latrines				
	Total Household = 382,624 Total cost to provide support for construction of latrines in the households = [382,624*0.308*3,000]				353,544,576
	<b>Sub-total</b>				<b>353,544,576</b>

<sup>1</sup> Upper Poverty Line: The moderate poor households are those households whose food expenditure is at the level of food poverty line.



Sl.	Activity	No. of Upazila /Union	Unit	Unit Rate (BDT)	Total Cost (BDT)
<b>3</b>	<b>Construction of DEWATS and mini sludge treatment plant in Cluster A Unions in 8 Upazilas</b>				
	Assumptions: For promotion of fecal sludge treatment, one DEWATS (BDT 2,000,000) and one mini fecal sludge treatment plant (BDT 5,000,000); hence, total cost BDT 7,000,000 per Union				
	One DEWATS and one mini fecal sludge treatment plant	8	No.	7,000,000	56,000,000
	<b>Sub-total</b>				<b>56,000,000</b>
<b>4</b>	<b>Containment standardization, upgradation, monitoring and additional equipment</b>				
	Assumptions: Capacity building of masons for constructing/upgrading containment based on standard design, and WATSAN Committee members for monitoring the construction of containment				
	Cluster A	8	Per Union	500,000	4,000,000
	Cluster B	61	Per Union	500,000	30,500,000
	<b>Sub-total</b>				<b>34,500,000</b>
<b>5</b>	<b>Capacity building, awareness raising, communication, and other soft components</b>				
	Assumptions: (This is an average estimate, that may have to be revised based on population size of the Union)				
	Union	69	No.	1,000,000	69,000,000
	<b>Sub-total</b>				<b>69,000,000</b>
	<b>Total (at Union/Upazila level)</b>				<b>715,044,576</b>

Following a similar format/template, tentative budgets for Upazila/Union level action plans have been developed for Rural Areas of all 64 districts of Bangladesh. These tentative budgets are available with the LGD.

**Total tentative budget for Union/Upazila level actions in 64 districts is BDT 45,762,852,864.**

