

BANGLADESH

FSM

NETWORK



3rd
FSM
convention
BANGLADESH 2018

PROCEEDINGS

REPORT

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31 October 2018 | DPHE Auditorium

Convention Proceedings

By Bangladesh FSM Network

Bangladesh Faecal Sludge Management (FSM) Network organised the 3rd FSM Convention, with the aim to find the way forward in terms of sharing experiences for policy influencing and promoting the business of faecal sludge. Focused on resource mobilisation for ensuring and scaling up sustainable FSM services in Bangladesh, this day-long convention brought together sanitation actors and the other relevant stakeholders to share the learnings from the FSM journey in Bangladesh and suggest initiatives to scale up the momentum.

Bangladesh FSM Network believes these learnings will be continued and scaled up by all the stakeholders working on safe management of faecal sludge. These will serve to bring into focus the challenges and issues like Public-Private Partnership (PPP) led inclusive business of waste management, actions for influencing the policy makers, investment for sustainable services, scaling up by contextualising the technologies, bringing diversification in the end products and raising more social awareness.

Acknowledgement

Bangladesh FSM Network acknowledges the support from Department of Public Health Engineering (DPHE) of the Ministry of Local Government, Rural Development and Co-operatives (LGRD&C) for hosting the convention.

We extend our sincere thanks to Local Government Division (LGD), Local Government Engineering Department (LGED), Department of Environment (DoE), Bangladesh Bank, ITN-BUET, Dhaka WASA, City Corporation authorities of Dhaka North, Dhaka South, Chattogram, Khulna, Gazipur and Mymensingh, Municipal authorities of Benapole, Faridpur, Jamalpur, Jashore, Jhenaidah, Kushtia, Laxmipur, Narshingdi, Saidpur, Sakhipur, Satkhira, Sirajganj and Teknaf, Municipal Association of Bangladesh (MAB), Sweepers Cooperatives, IDLC Finance Limited, ERAS and Aid Foundation for their valuable contributions.

We thank all of our stakeholders and express our gratitude to Bill & Melinda Gates Foundation and the European Union for their whole-hearted support.



Session Plan

01 | 10.00 – 11.15 am
Inaugural Session

03 | 11.45 am – 1.00 pm
Technical Session
Sharing experiences for
scaling up sustainable FSM
system in cities and towns

02 | 11.15 – 11.45 am
Gallery Walk

04 | 02.00 – 03.00 pm
Panel Discussion:
Talking about “Shit Business”

05 | 3.30 – 4.00 pm
Concluding Session

Acronyms

BMGF	Bill & Melinda Gates Foundation
BUET	Bangladesh University of Engineering and Technology
CEO	Chief Executive Officer
CSR	Corporate Social Responsibility
DoC	Department of Cooperatives
DoE	Department of Environment
DPHE	Department of Public Health Engineering
ERAS	Environmental Resource Advancement Service
FSM	Faecal Sludge Management
GoB	Government of Bangladesh
INGO	International Non-Governmental Organisation
IRF	Institutional and Regulatory Framework
LGD	Local Government Division
LGED	Local Government Engineering Department
LGRD&C	Local Government, Rural Development and Co-operatives
LIC	Low Income Community
NOC	No Objection Certificate
O&M	Operation & Maintenance
ODF	Open Defecation Free
PPP	Public Private Partnership
SDC	Society Development Committee
SDG	Sustainable Development Goals
TPO	Treatment Plant Operator
WASA	Water Supply & Sewerage Authority
WASH	Water, Sanitation and Hygiene
WSUP	Water & Sanitation for the Urban Poor



Inaugural Session

Welcome, context and objective sharing

Dr Khairul Islam
Country Director, WaterAid Bangladesh

Keynote presentation on “Avenues for green business and resource mobilisation for the FSM sector”

Mr Asif Iqbal
Deputy Director, Bangladesh Bank

Guest of Honour

Dr Sultan Ahmed
Director General, Department of Environment

Special Guest

Engr. Md. Saifur Rahman
Chief Engineer
Department of Public Health Engineering (DPHE)

Chief Guest

Ms Roxana Quader
Additional Secretary
Local Government Division, Ministry of LGRD&C



The session started with a welcome speech from **Dr Khairul Islam**, Country Director of WaterAid Bangladesh. In his speech Dr Islam stated that Bangladesh is now almost free of open defecation. However, putting an end to open defecation will not help to meet the second- generation sanitation challenges as faecal sludge has found its way into the open environment. When the septic tank gets full, the pit-emptiers empty the sludge manually and dump those in to an open space. Moreover, many people connect their septic tanks to drainage/sewage system or nearby waterbodies directly through pipes. Thus, environmental and health hazards is intensifying.

Dr Islam urged the sanitation sector to priorities, collaborate and mainstream FSM more in coming years. Though the concept of FSM is a fairly new one, albeit very important, it plays a pivotal role in commitment of achieving Sustainable Development Goal (SDG) 6 and ensuring sanitation for all by 2030.



Mr Asif Iqbal, Deputy Director of Bangladesh Bank, presented the keynote where he projected a pathway for turning FSM into a self-sustaining commercial venture which will contribute to the Bangladesh Government's vision of becoming a developed country by 2041. Mr Iqbal emphasised on proper emptying and transportation services along with ensuring diversity in producing recycled and reusable products. He hopes Bangladesh can become a pioneer in green business as the world is doubling down on environment friendly business and industry models. A business derived from FSM will be a great step towards the Green Growth Vision for Bangladesh.

With the opportunities, Mr Iqbal drew attention towards the challenges faced in developing a successful business model. He said, the current model lacks a methodical planning and properly managed supply chain. Marketing channels of end products are very complicated. The technology is often expensive and unavailable. The skills of the workers involved in the process need to be developed as they lack contemporary knowledge and business management skills. The transportation system too has flaws which need addressing. To meet these challenges, Mr Iqbal also outlined some suggestions and financial landscape for the potential entrepreneurs. Changes in policies of Bangladesh Bank can lead the banks and non-bank financial institutions financing and insuring the entrepreneurs to conduct FSM business. Impact investments can also be a good idea to create sustainable business opportunities.



Dr Sultan Ahmed, the Director General of Department of Environment (DoE), expressed his disappointment on the present state of sludge disposal. He labelled indiscriminate dumping of faecal sludge an alternate version of open defecation. He opined to introduce FSM all over the country at the earliest possible time for not letting the tremendous effort Bangladesh put on in achieving open defecation status in vein. Dr Ahmed shed light on the National Environmental Policy and role and opportunities of FSM in successful implementation of this policy countrywide.



Mr Md Saifur Rahman, Chief Engineer, DPHE, added that 80-85% of the population are still out of sewerage system coverage in Dhaka city. The situation is even worse in the outskirts and outside of the capital. Every year, many instances of death are reported while emptying septic tanks manually as the sanitation workers lack adequate occupational health and safety knowledge and facilities. Mr Rahman expressed his optimism that with collaboration from BMGF, ITN-BET and the development organisations, DPHE is gaining great momentum and will be able to play a key role in the FSM sector.



The chief guest, **Ms Roxana Quader**, Additional Secretary, Local Government Division, Ministry of Local Government, Rural Development and Co-operatives, prioritised FSM in achieving SDG 6. She expressed firm desire to gradually implement the IRF for FSM, which government legislated last year, countrywide. She informed the audience that a National Action Plan for FSM is being developed with the support from ITN-BUET and other stakeholders.

Ms Quader expressed her satisfaction about the leaps and bounds Bangladesh have made to curtail open defecation over the last few decades and step FSM forward into a reality within the last few years. She thanked all the stakeholders for supporting the Government of Bangladesh to make this happen and wished to continue the journey together to set Bangladesh as a role model in turning waste into wealth.





Technical Session

**Sharing experiences
for scaling up
sustainable FSM system
in cities and towns**

Panelists

Uttam Kumar Roy
Deputy Managing Director - Finance
(Additional Charge to Commercial Manager)
Dhaka WASA

Shishir Kumar Biswas
Executive Engineer
Department of Public Health Engineering (DPHE)

Tarikul Islam Palash
Chief Executive
Aid Foundation

Moderator

Abdus Shaheen
Country Programme Manager
Water & Sanitation for the Urban Poor (WSUP)

The second session of the day was designed to share technical experiences for scaling up sustainable FSM system in cities and towns. Both government and private sector representatives highlighted the achievements and challenges while working in the sector either as regulator or business promoter.



Mr Uttam Kumar Roy, DMD-Finance (Additional Charge to Commercial Manager), Dhaka WASA put emphasis on developing Public Private Partnerships for a sustainable FSM system. Presently, Dhaka WASA is providing FSM service in the city using vacuum tankers by engaging private entrepreneurs under PPP arrangement and taking technical and financial assistance from WSUP and UNICEF. While reiterating his experience, Mr Roy shared some challenges faced. The initial challenge is the unfavourable social perception on FSM as a business. Private entrepreneurs are not well conversant to this business. In the service sectors FSM is of low priority in comparison to other WASH services. The legal and regulatory base of FSM service and business is often ambiguous. Moreover, there is also a lack of communication among stakeholders. There is scarcity of land to construct transfer stations and treatment plant.

Mr Roy outlined some scopes of work as well. To achieve success in FSM centred business model, the demand for such services has to be significantly increased. Also, Low-Income Communities (LICs) are often in need of such services the most, so the percentage of serving LICs must be amplified. Besides, The disposal system and technologies requires strengthening.



Mr Shishir Kumar Biswas, Executive Engineer of DPHE, shared DPHE's experience of hope and change. The national lead agency is demonstrating low cost technology of faecal sludge treatment including well equipped sludge transport system. FSTP had been constructed in 11 Municipalities and 26 vacuum tankers were delivered with training provided to the operators. With support from Government of Bangladesh and development partners, more than 85 municipalities have started or about to start providing FSM services. Mr Biswas described Biofill Toilet Technology for onsite FSM which DPHE has incorporated in their special projects for the Forcibly Displaced Myanmar Nationals. DPHE has also established FSM support cell to plan, design, coordinate and monitor the activities of capacity building, awareness campaign, standardisation of the services and implementation of IRF countrywide.

Mr Biswas discussed how DPHE is developing human resources through different courses, transferring technologies and sharing knowledge via DPHE Human Resource Development Centre. He stated that few major threats like lack of public awareness, low institutional strength, inadequate financing and irregular frequency of emptying are slowing down the progress of FSM. Mr Biswas put emphasis on some technological modifications for better treatment facilities and raising awareness amongst the community people for ensuring the sustainability of the service. He also urged to introduce more clear policies and strategies, like IRF, for scaling up the progress of FSM in Bangladesh.



Mr Tarikul Islam Palash, Chief Executive of Aid Foundation, discussed how profitable the FSM business can be. In Jhenaidah Municipality, the FSM services are run in collaboration with Aid Foundation. After 10 months of operation, an approximately 1.1 million BDT (13,000 USD) was made in revenue. During this period, the municipality has emptied and transported 2011 cubic metres of faecal sludge.

Even after such performance Mr Palash alluded to some challenges that plague the FSM services in his municipality. People in general have a lack of awareness regarding the necessity and importance of FSM services. There are ambiguous legal issues that often discourage entrepreneurs to be involved in such commercial endeavours. The pits are still emptied manually. While transporting, the sludge scatters around everywhere because of the bad state of the roads. This problem is intensified with the troublesome condition of the vacutags.



While summing up the discussion, the moderator **Mr Abdus Shaheen**, Country Programme Manager, WSUP, addressed a number of important points, recommended by the panellists.

- Construction of pit latrines should be discouraged countrywide. Moreover, in the urban setting, the construction of septic tanks in every house should be declared mandatory. After a certain cut-off date, the connection of toilet pipes to the drainage system should be declared punishable and heavy penalty should be imposed for such type of offence
- A valid design structure should be introduced and operationalised for the service and O&M in the Institutional and Regulatory Framework for FSM
- There is a long legal process to be completed to start business related to FSM and entrepreneurs are unaware of business opportunities about sludge management. The equipment necessary to create a proper business from FSM are either expensive or rare. Bangladesh Bank might keep a separate allocation for refinancing facilities in FSM business with low rate of interest to encourage the private sector
- More involvement of elected parliament members and local government representatives is required for effective functioning



**Panel
Discussion**

**Talking about
“Shit Business”**

Panelists

Dr Muhammad Ashraf Ali
Director, ITN-BUET

Hasin Jahan
Country Director, Practical Action

Md Nazrul Islam Mian
Project Director, DPHE

Sk Shahriar Bin Rasul
Managing Director, ERAS, Kushtia

Mesbah U Ahmed
General Manager, IDLC Finance Ltd.

Md Shahjahan Miah
CEO, Faridpur Municipality

Dr Liakath Ali
Director, Programme and Policy Advocacy
WaterAid Bangladesh

In this session, moderated by Dr Muhammad Ashraf Ali, Director of ITN-BUET, the panellists talked about the future of the FSM business. The panellists discussed about diversifying the product. They also talked about adopting an integrated approach to manage faecal and solid waste. If the government incentivises green business models and the entrepreneurs diversify their products, a sustainable approach to FSM can be achieved. The panellists also discussed about the role of PPP in Faecal Sludge Management. The panellists emphasised on capacity building, local knowledge sharing, using low-cost but appropriate and functional technologies, changing perception towards FSM and raising awareness to promote the business of faecal sludge.



Dr Muhammad Ashraf Ali, Director of ITN-BUET, started off the discussion by highlighting the necessity of planning and implementing larger scale projects instead of small-scale projects for achieving the SDG 6. Dr Ali also suggested PPP should be the central modality while approaching FSM. Cooperation from government and impactful investment will also need to be in place. He expressed his apprehension about the FSM service being bogged down just to pit emptying and transporting the sludge. Additionally, reusing the sludge by turning it into compost has its own set of challenges. Dr Ali put emphasis on setting up clear legislature regarding the quality control of the compost and so on.



Mr Md Nazrul Islam Mian, Project Director of DPHE, reminisced about the FSM situation before the independence and commented on how far Bangladesh have come since then. But, he regrets that only 20% households in Dhaka are covered with sewage network in the present state of affairs and that the rest of the country does not have any effective sludge/excreta management system. Bangladesh is now an open defecation free country, but without an effective FSM system, it will not matter whether there is open defecation in Bangladesh or not. The harm will be the same with indiscriminate sludge disposing everywhere. To fully reap the benefits of stopping open defecation, every household has to come under FSM services.



Mr SK Shahriar Bin Rasul, Managing Director of ERAS from Kushtia, shared his experiences of running this challenging business. On an average, ERAS produces 50 metric tons of fertilisers from 80 cubic metres of faecal sludge, at a conversion rate of 63%. Apparently, this compost business using faecal sludge is quite lucrative as the raw material is virtually free of cost and endless. From the business point of view, this is insufficient. Moreover, the process of licensing and standardising those fertilisers is long-winded. From the first-hand experiences gathered, he suggested that the treatment plants need to be on a larger scale with diversified functionality of treating other wastes too.



Dr Liakath Ali, Director of Programme and Policy Advocacy, WaterAid Bangladesh, discussed about the risks of focusing solely on the business model of FSM. Rather, he urged to look for its social benefits as the proper management of faecal sludge has many important social and environmental impact too. Dr Ali opined that the success in business will come eventually if people start focusing on the social impact of FSM more.



Mr Md Shahjahan Miah, CEO of the Faridpur Municipality, remembered the challenges faced in the earlier days. With the support from Practical Action and BMGF, Faridpur Municipality has developed and established a comprehensive business model for FSM, adopting PPP approach. Two traditional pit-emptier groups, one of Harijans and another of Muslims, have been transformed into business cooperatives through formal registration under DoC having their own constitution, bank account and operational management structure in place. The treatment plant has been leased out to SDC for operating, producing and marketing compost. The municipal authority regulates the service delivery of the cooperatives and TPO through service level agreements. Mr Shahjahan mentioned that currently the emptying and transporting service is profitable, but the treatment plant is yet to enjoy profit. The plant now has a NOC from the DoE, but there are a few other certification necessary and the process is underway. Besides, Mr Shahjahan highlighted the necessity of more vacutags aligning with the increase in demand for FSM service. Already, 45% of the people use the services which was 10% just a year ago.



Mr Mesbah U Ahmed, General Manager of IDLC Finance Ltd., focused on green financing practices and expressed his interest in financing opportunities to promote FSM business. Mr. Ahmed believes the future of any business depends on the proper financing of the entrepreneurs. The FSM business is at its early stages, it will benefit very much from customised financial schemes from the banks and other financial organisations. Mr. Ahmed considers the FSM business to be a very lucrative opportunity for both the country and the entrepreneurs.



Finally, **Ms Hasin Jahan**, Country Director, Practical Action stated that the success of FSM will hinge upon the successful implementation of PPP approach led by the private entrepreneurs and regulated by the government. Ms Jahan pointed out the emptying and transferring of faecal sludge became a successful business because of rigorous social awareness campaigns. However, the treatment of the faecal sludge remains a problem as the plants are very expensive and the volume of production is insignificant. The products also have a limited market and the policy procedures for licensing and standardising these products is yet to be entrepreneur friendly. To make the enterprise more sustainable, the entrepreneurs must diversify their products.

According to Ms Jahan, FSM business will flourish if the cost effectiveness of the whole process is increased. An integrated approach to waste management, solid waste along with faecal sludge, will work wonders towards achieving SDG 6.1 and 6.2 and turn the initiative into a profitable venture. This approach will of course need the support from government as they can initiate policies and create enabling environment to incentivise green business models. The informal waste and sanitation workers need to be formalised into the mainstream workforce. Besides, inclusive waste and sanitation planning and budgeting by municipalities and enhanced CSR by recycling companies and their supply chains contributing to relevant policies, can play a vital role in strengthening this green business.



Concluding Session

Key Recommendations & Sum up

Dr Mujibur Rahman

Professor

Department of Civil Engineering

Bangladesh University of Engineering and Technology (BUET)

Vote of Thanks

Mr Robin Raihan Ahmed

Superintending Engineer and Chairman

FSM Support Cell

Department of Public Health Engineering (DPHE)

In the concluding session, **Professor Dr Mujibur Rahman**, Department of Civil Engineering, BUET, provided a summary and highlighted the unique outcomes of the discussions that went on throughout the day in securing sustainability of FSM in Bangladesh. Carefully analysing the recent trends of government bodies and development partners, that are supplemented by the private sector, he underscored the necessity of making mass people and policy makers aware of the developments and prepare them to adapt to the social, environmental and economic opportunities of an effective and functional FSM system. He wondered, as FSM is at the early stages in Bangladesh, extra focus on profit making might damage its way forward. Safe sanitation for all by 2030 will be achieved and business will follow as long as FSM services gain grip and popularity among the masses backed by favourable policies and strategies.



Summing up the day-long discussion, Dr Rahman provided six recommendations to make FSM success even more effective:

- 1. All-encompassing awareness building activities should be mounted to sensitise the target population. The importance, current practices and success of FSM must be conveyed to the people**
- 2. The politicians and the government institutions too need to be aware of these facts as a group of sensitised policy makers is essential for the idea of FSM to be successful**
- 3. Building the operational capacity of the workers involved in FSM business must receive a high priority**
- 4. Without sufficient technological capacity for providing sludge emptying, transporting and treatment service and appropriate managerial capacity of its staff to function the business of the treatment plants, an effective service delivery and business model will not function properly**
- 5. Private sector must become a part of the FSM process. To turn the FSM business into a profitable venture, private sector affiliation would be imperative.**
- 6. Decent working conditions for the pit emptiers and the sanitation workers along with scaling up of inclusive business model of waste and sludge management has to be ensured. The life of the pit emptiers and the cleaners are often risky, inhumane and degrading. They do not even get a proper wage for providing such services. These informal workers must be included in the mainstream workforce.**



Mr Robin Raihan Ahmed, Superintending Engineer and Chairman of FSM Support Cell, DPHE, delivered the vote of thanks. He thanked all the stakeholders involved in organising the convention, the facilitators and the participants for a day spent in learning and sharing FSM insights in Bangladesh. He foregrounded the 4th version of the convention with more representatives from the stakeholders working on all the segments of FSM value chain. The Government of Bangladesh considers FSM as one of the key components for achieving the vision of sanitation for all by 2041 and SDG 6 since the very beginning. Bangladesh FSM Network, a platform for all the development partners working on FSM, is very much involved in the process of taking FSM forward. Mr Ahmed put emphasis on the need of comprehensive systems, knowledge sharing and sectoral collaboration rather than only few components to develop more accurate solutions.

THROUGH THE LENS

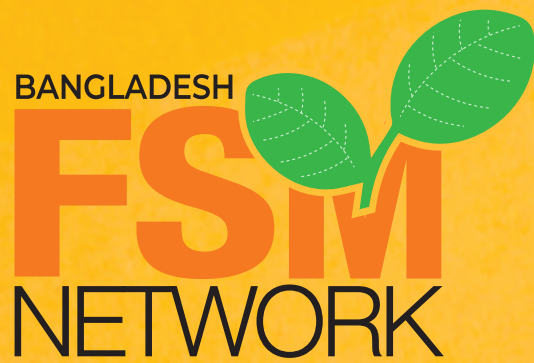


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Bangladesh Faecal Sludge Management Network is a common and collective platform for the sector actors to generate ideas, share views, influence policy and practice, and raise a collective voice to meet the challenges of sanitation sector