

Faecal Sludge Management: Second Generation Sanitation Challenge

Hasin Jahan, Country Director, Practical Action Bangladesh

In Bangladesh, only 1 percent defecation happens in open places. It is definitely a great achievement for us. Now we have to be ready for the second generation sanitation problem: safe management of faecal sludge. To define the roles of different State Agencies, an institutional regulatory framework has been developed very recently, and it is under approval process by the Ministry of Local Government, Rural Development and Cooperatives. Today we will discuss more about it. We will also talk about the appropriate technologies for FSM. Market development of the sludge recycled product is another important issue to be discussed in today's roundtable. We have to include beyond WASH stakeholders to address this challenge.

Prof. Dr. Md. Ashraf Ali, Director, ITN-BUET

In the South Asian region we have successfully expanded our sanitation facilities and overcome the first generation challenge. Now we need to think about how we can manage the faecal sludge that accumulates in the pits and septic tanks. As we do not have proper FSM system in place people, particularly in low income areas, manually drain the sludge to the nearby lowlands and water sources. So we are not getting the benefit of our open defecation achievement.

Earlier on-site sanitation (OSS) was thought to be as a temporary solution. Now experts are thinking that with proper FSM, OSS can be an effective and sustainable solution especially for relatively low-density settlements. The cost of FSM technologies could be 5 times less expensive than conventional sewer based solutions.

The Institutional and Regulatory Framework for FSM identifies ways and means of implementing FSM services and defines specific roles and responsibilities of various institutions and stakeholders. The framework focuses on hygienic collection and emptying of faecal sludge ensuring health and safety of the emptiers. It also ensures mechanical desludging and use of safety gears. The traditional pit emptier community will be integrated in FSM services. Another important point is proper transportation of collected faecal sludge to treatment/disposal site. The IRF also prescribes for robust involvement of DPHE, LGED, WASA and private sector in FSM services. It also asks for coordination with DoE, IEDCR, DAE for environmental compliance, and quality assurance and marketing of end products. Now the challenge is to implement the FSM system according to this framework.

Dr. Feroz Ahmed, VC, Stamford University

In Bangladesh we have several FSM systems. We have to choose the financially viable one. One of the most feasible method is to co-composting with solid waste. It produces good quality compost. But the problem with the composting plant is that it is not financially self-sufficient. The government should subsidize these plants. It should be seen as an investment.

Dr. Md Abdul Mueyed, Director, Department of Agriculture Extension

Due to scarce production of compost our farmers generally use chemical fertilizer. It results in decreased fertility of the soil. Using faecal sludge for compost production can be a good solution for both FSM and fertility of the soil. Here we have to ensure that pathogens and heavy metals are removed from the compost. We have a registration process for compost which can be followed for this type of compost also.

Dr. Abdullah Al-Mueyed, WASH Technical Advisor, WaterAid Bangladesh

There is huge scope of capacity development to address the second generation sanitation challenges. We should incorporate this issue in our education curriculum.

Soil is the most precious natural resource. To maintain the fertility of the soil we need to use organic fertilizer. Government should encourage using faecal sludge to produce organic fertilizer. There is also a scope of public-private partnership in this area. Finally the registration process of organic compost need to be liberal and quick for private sector participation.

Martin Ronald Pramanik, Marketing Manager, MAWTS

Presently we work on for the development of mechanical equipment and machines for collection of semi-solid waste. Now we are looking for an effective and low cost solution for the management of solid human excreta.

SMA Rashid, Executive Director, NGO Forum for Public Health

We urgently need a national plan of action on FSM. We have to invest in capacity building of all the stakeholders. Currently, the FSM project is headed by local government ministry. But there are also other ministries and agencies related with this work. That's why there should be an inter-ministerial mechanism for this project. Finally, we need to make our people aware about FSM issues. There should be regular campaign on it. Media can help us a lot in this regard.

Md. Omar Faruq, Managing Director, Faruq Fertilizers Ltd

I want to talk about the demand side. A fertilizer producer always tries to find quality raw materials within affordable price. He will be eager to invest in it. So if we can properly manage the FSM, fertilizer producers will be interested in it. It will be an important source of organic fertilizer. It should conform to the government standards and regulations for organic fertilizers. The government can make a regulation that dealers enlisted by the government have to buy one percent organic fertilizers from commercial manufacturers. Farmers are the ultimate consumers of fertilizer. So we have to train and create awareness among them about organic fertilizers.

Md. Shafiqul Islam Akhand, Project Director, UGIP-III

FSM should be treated as a service. Municipalities have to have the capacity to provide this service. There is also a financial issue. NGOs have done some pilot projects with municipalities that need to be scaled up. The government should take the lead. It should provide the large part of capital requirement. Primarily, we can start with the district municipalities. An efficient treatment plant should be in place. We need to use simple technologies so that the municipality workers can handle it. We need to create some successful models to be scaled up nationally.



Recently DSK, ITN-BUET, Practical Action and The Daily Star organised a roundtable on "Faecal Sludge Management: Second Generation Sanitation Challenge". Here we publish a summary of the discussions.

- Editor

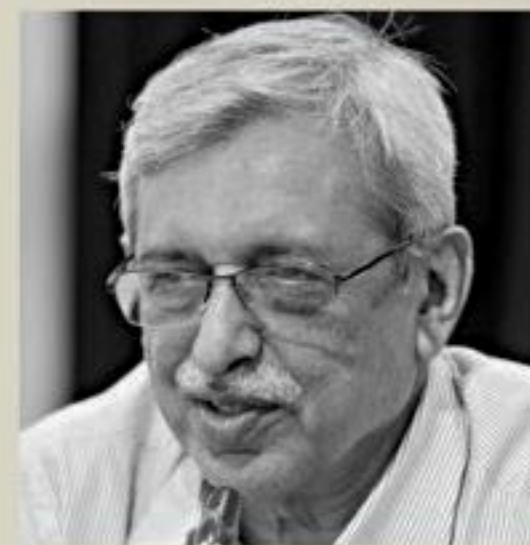
PARTICIPANTS



Hasin Jahan



MD Ashraf Ali



MD Feroz Ahmed



Md Abdul Mueyed



Abdullah Al-Mueyed



Martin Ronald Pramanik



SMA Rashid



Md Omar Faruq



Md Shafiqul Islam Akhand



Shahidul Islam



Shamim Al Razi



Md Akramul Islam



Md Shofiqul Alam



Uttam Kumar Saha



Md Ashiqur Rahman



Mostafa Quaium Khan



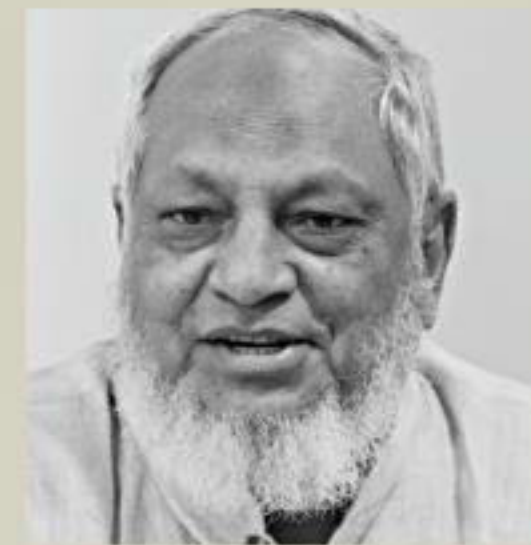
Riazur Rahman



Md Badruzzaman



Alok Majumder



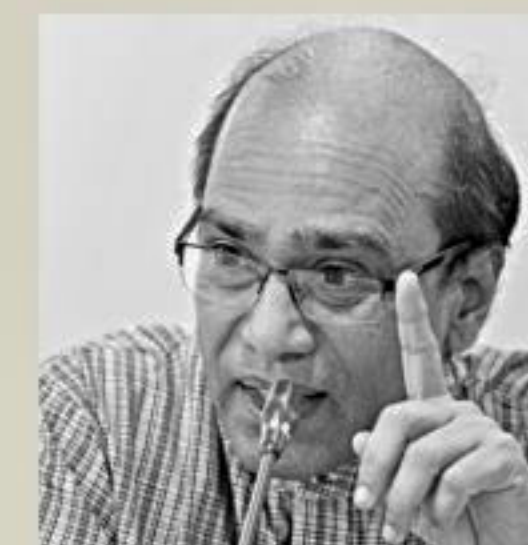
Giasuddin Ahmed Chaudhury



Uttom Kumar Roy



Tariq Bin Yusuf



Dibalok Singha

Shahidul Islam, Governance Advisor, SNV
Bangladesh National Building Code (BNBC) has clear guidelines for the construction of sanitation facilities. But on the ground we do not see proper implementation of the BNBC. In many cases we have found that septic tank is connected with water flows which is dangerous for human health and environment. The knowledge gap between local government authorities and WASH related bodies should be bridged to stop such misconducts.

Shamim Al Razi, Secretary General, Municipal Association of Bangladesh

In the Municipality Act 2009 there is a provision for FSM. We have also formed committee for this purpose. But we do not have any clear guideline for implementing FSM services. The engineering department of municipalities is also ill-equipped and the workers do not have the capacity to provide this service. That's why we need to invest in

raining the necessary human resources for FSM.

Md. Akramul Islam, Director - WASH Sector, BRAC
We need to find a pro-poor business model and technologies for FSM. There should be a clear outline of the scopes and responsibilities of different stakeholders. From our side we are working with local government bodies on proper emptying and transportation of faecal sludge. We are also doing some investment in building sustainable and pro-poor FSM technologies.

Md. Shofiqul Alam, WASH Specialist, UNICEF

We need to talk more with the government because ultimately they will lead the FSM. Unfortunately we do not see much participation from the government side in FSM related discussions. The main reason behind our laudable success in reducing open defecation was all out support from the government. In FSM we need similar type of help from them.

Uttam Kumar Saha, Head- Energy and Urban Services, Practical Action

A complete system for FSM starting from collection of faecal sludge to market development of the end product is under construction at Faridpur municipality technically supported by Practical Action, Bangladesh. Traditional sweepers are the biggest market actors. We are supporting Faridpur municipality to organize and build capacity of traditional emptiers and helping to establish as formal entrepreneur to take the full responsibility of collecting and transporting faecal sludge in binding agreement with the municipality. Our model suggests that the municipality needs a subsidy initially for one year to run the treatment plant which they have agreed to provide from annual sanitation budget. Online demand management system is under construction to get the emptying service quick and fast. We have tested some low cost equipment (gulper, transporter) for sludge collection and transportation and received very good feedback from sweepers. We request the Government to develop national plan of actions and implementation guidelines which will encourage investment on FSM by donors

Md Ashiqur Rahman, UNDP

We need to have a strong market incentive mechanism for FSM. Otherwise we will get only service providers not the private entrepreneurs. We should also create an incentive mechanism for household. At the initial stage we can depend on subsidy but ultimately we have to create a self-sufficient mechanism. Only then we will get a sustainable business model for FSM.

When we talk about capacity building of local actors we have to keep in mind the issue of involving community.

Mostafa Quaium Khan, Advisor, Bangladesh Urban Forum

The Dalit community is basically engaged in FSM services. They are one of the most neglected and excluded communities in the urban area. When we talk about FSM we should also focus on the wellbeing of this community.

Riazur Rahman, Programme Officer, SDC

WASH is one of our priority areas under Local Governance Domain of SDC and in last few years, we have invested in this sector to achieve MDG target. Our working area was in hard to reach unions of Bangladesh to serve poor and disadvantaged people. I think we need to invest in innovative solutions for FSM in rural areas although priority in urban areas. In the financing part, PPP can be a good model to work on. I request Research and Development units of DPHE to explore appropriate technologies on FSM and to validate those to cope with second generation sanitation challenge in the sector efficiently.

Md. Badruzzaman, Design Engineer, WSUP

We are working in several slums in Mirpur area. We have developed an effective PPP model with WASA for sludge collection in the area. This type of model can be replicated in other areas.

Alok Majumder, Country Coordinator, WASH Alliance Bangladesh

If we can properly manage faecal sludge it is an asset. I want to urge the government to approve the framework of FSM as early as possible. Without it we will not be able to implement our plans.

In the business part I want to emphasise on tariff fixation for FSM. If there is no progressive tariff in this sector private sector will not be interested in it.

Giasuddin Ahmed Chaudhury, Deputy Team Leader, Delta Plan Development Programme Bangladesh

We need to set some standards for FSM, and include them in the policy. We are also emphasising on innovative solutions for FSM. Another important issue is coordination between government and non-government initiatives. We are seriously considering about creating a platform and centralizing this coordination work. We are planning to give some incentives to the operators so that they feel encouraged to implement FSM projects effectively.

Uttom Kumar Roy, Commercial Manager, Dhaka WASA

Dhaka WASA is legally responsible for providing sewerage services to the citizens. Unfortunately we cover only 20 percent. There is a huge scope of providing on-sanitation for the rest 80 percent. We have completed our sewerage master plan. In this plan we have divided the whole city area into twelve segments. We have only one sewerage treatment plant. Another one is in construction process. Earlier we thought about producing electricity from the residuals of these plants. But it is a huge arrangement. So we abandoned the plan. Now we are planning to generate gas from it. I think we also have a huge scope of using the residuals in compost production. It will save our foreign currency. But only compost production will not be viable. We should also consider the other components of this project. We can produce biogas from faecal sludge. Emptying of septic tanks and collection of faecal sludge can generate revenue. We have to consider the issue holistically. Only then it will be profitable and viable. We are doing several FSM projects in different parts of the city. We are planning to cover the whole city within 2035. To do it we need huge investment. There can be some environmental charge on city households to collect a partial amount of this huge sum.

Dr Tariq Bin Yusuf, Project Director, Urban Business Project, DNCC

City corporations and municipalities lacks proper staffing for FSM service to city dwellers. At present, there are some pilot projects going on with the support of NGOs. But how can we scale it up? To do that, we need institutional arrangement and budgetary provision. We need to train our local government officials on this issue.

Dr Dibalok Singha, Executive Director, DSK

We are losing more than 295 billion taka due to the absence of proper WASH and FSM facilities. It also poses a serious threat for our public health and environment. The positive thing is that the government is thinking about it seriously. It has decided to form a committee in this regard. We need to continue our effort to formulate the operation procedures for FSM and implement it effectively. We need to work on demand side so that people ask for FSM service. We need to create awareness among the citizens to create demand of this service. We have to ensure participation of communities in this effort.