TAKING STOCK OF FSM PROGRESS

FULL SUMMARY OF THE DGROUP DISCUSSION

OCTOBER 25- NOVEMBER 14, 2016

CONTENTS

INTRODUCTION

This is the summary of the email discussion "Taking stock of FSM progress" on the WASH Dgroup platform from the 25th of October till the 14th of November 2016. The discussion was moderated by SNV, and the urban sanitation discussion group involves 354 people from 42 countries.

The focus of this discussion was on faecal sludge management (FSM) and the discussion served as an input for a learning event in Dakar organised by the Bill and Melinda Gates Foundation. In this learning event, South Asian partners visited the FSM experience of Dakar. In the Dgroup discussion there were 25 contributions from 13 countries. The discussion aimed to bring together examples and perspectives of practitioners and reflect on practices. This summary is not intended as a conclusive document on the subject.

SUMMARY TOPIC 1: WHERE ARE WE AT IN FSM?

Dear colleagues,

We have now come to the end of the first topic in this Dgroup discussion: "Taking stock of FSM progress". There were 7 contributions from 4 countries: Bangladesh, Uganda, Cambodia and India.

In this first topic, we started with a broad reflection on the state of the art in Faecal Sludge Management at the moment. The guiding questions for this first topic were:

1. What is understood by Faecal Sludge Management in your country?
2. What are the big break-through's in FSM over the past 5 years?
3. Which strategies do think will be needed to take FSM forward?

Below you find my summary of this first topic. The contributions provided specific information about the countries, which is very useful, but I have not repeated all this information in the summary. Please accept my apologies in advance for any loss of relevant detail in your contributions or any misinterpretation. I encourage everybody to go back to the original messages to understand more about the country context.

Best,
Ant.

1.1 WHAT IS UNDERSTOOD BY FAECAL SLUDGE MANAGEMENT IN YOUR COUNTRY?

In Bangladesh, FSM is considered a second generation problem or challenge as described by Muyeed Abdullah from WaterAid Bangladesh. Open defecation rates have been greatly reduced (1 percent in the 2015 JMP report), but half of that is unimproved. Moreover, the management of the sludge is still largely inadequate. While master plans for cities and towns have included sewerage, there is almost no plan regarding sludge. Sahidul Islam from SNV Bangladesh adds that since early 2000 there have been different small initiatives and innovations regarding FSM in the country, but these did not address the total sanitation value chain. Only recently there is a broader understanding that FSM should be understood as management of the entire value chain, meaning capture/containment/emptying/transport/treatment and re-use. In spite of this, as Muyeed points out, there is still a risk that people understand FSM to entail only the solid part of the sludge. Management of the liquid part is equally important for both health and re-use purposes.

Osbert Atwijukye from Water for People in Uganda explains that his country, FSM starts by understanding that most on-site facilities are dry, which influences the choice of solutions. While Osbert also points to the need to address the entire sanitation value chain, he stresses that addressing the problem of foreign materials in pits (such as garbage) is part of proper FSM. So the user interface and containment, and thus behaviour of users, should not be overlooked. Bunleng Tan from SNV Cambodia points out that FSM is ultimately about safe management of excreta, which in rural context can also include disposal on the plot itself.

Hdrudananda Mohanty and Pragyan Nayak from Practical Action in India explain that historically the understanding of FSM in India was limited. This was due to the focus of the national government on centralized sewerage and treatment, as well as the limited interest from local bodies to prioritize the issue. While septic tank construction standards were defined, this was not enforced. Arumugam Kalimuthu from the WASH institute in India explains that due to the larger availability and sharing of data on FSM (for example the shit-flow-diagramme) now the sector is broadly aware. FSM is understood as the management of safe containment, transportation, treatment, disposal and re-use of treated faecal sludge and effluent. However, Suraj Kumar from IPE Global India adds that the understanding of FSM in India is still mostly as a temporary solution, till sewerage can be constructed ("gap-filling measure"). FSM is slowly starting to emerge as a mainstream solution, more suitable in certain conditions than sewerage.

To recap, we want to understand FSM as the management of the entire sanitation value chain from the user interface (and behaviour) till disposal or re-use. It should consider both the solid and liquid fractions, and be seen as a mainstream option, not a gap-filling measure. It can be an elaborate system of emptying, transport, treatment and re-use/disposal, but could also entail safe on-plot disposal in low-density contexts.

1.2 What are the big break-through's in FSM over the past 5 years?

I was very pleased to see so many break-through's...

In the contributions from Bangladesh and India, the attention to FSM at policy level has been highlighted. This has been achieved through greater visibility of the problem, using diagnostics and communication. In Bangladesh, both Muyeed and Sahidul mention the development of the Institutional and Regulatory Framework (IRF) for FSM which has been developed by the Policy Support Unit (PSU) at national level. Also the National Strategy for Water Supply and Sanitation (2014) mentions FSM. In India, the National Urban Sanitation Policy (2008) included FSM and of course the Manual Scavengers Act in 2013 raised the issue. Also, Prime Minister Modi has greatly contributed to raise the importance of sanitation in general and within that to find answers for on-site sanitation in cities.

Yet, the proof of the pudding is in the eating and that's why all contributions from Bangladesh and India point to the importance of testing and implementing these policies. In Bangladesh, the IRF will be tested for both cities and town context. In India, the goal is now for States Governments to further operationalise FSM for their context. A few states, as Arumugam writes, have already developed their policy guidelines. Further efforts toward operationalising are the launch of a "Rapid Assessment Tool" by the MoUD and the advice from MoUD to State Governments to rename their existing Water and Sanitation Boards, as "Water, Sanitation and Septage Management Boards". Suraj refers to FSM becoming part of other national government programmes with broader urban development goals.

Osbert feels that in Uganda the main break-through has been the recognition of the issue and the fact that now "shit" can be discussed more freely. Also, the introduction of new technology, such as the Gulper, has opened up possibilities for improved FSM. Another break-through is to approach sanitation as a business (SAAB). Bunleng explains that in Cambodia services are mostly provided by private sector but it is not yet viable.

1.3 Which strategies do think will now be needed to take FSM forward?

You suggested a range of priorities going forward. Interestingly, though a lot of people stated that awareness regarding FSM issues has increased, awareness and mind-set of both policy makers as well as the public remains a key priority according to many. Improved capacity is mentioned by nearly all as well.

Muyeed, Hdrudananda and Pragyan all seem to emphasize the need to create a greater critical mass for application of FSM locally. While technology innovation is crucial, it may not be only technologies with a high "wow" factor but also localised solutions that can bring change. For this, we need better learning in country, for example a country specific FSM network or sector group, and attention to FSM in universities. There needs to be more commitment and collaboration between civil society, private sector and government in relation to FSM.

Providing tools and setting benchmarks are also mentioned, among others by Suraj. He also mentions specifically the idea of a geo-spatial vision for planning of FSM systems. Further technological innovation (and examples of those) is mentioned by Osbert and Bunleng, while Sahidul emphasizes planning capacity. Everybody seems to agree that private sector is part of the solution, and that financially viable services are desirable, covering at least O&M costs. Yet, there's no clear consensus on what's needed to achieve that…

SUMMARY TOPIC 2: APPROACHES TO FSM PLANNING, URBAN SANITATION PLANNING AND CONDITIONS FOR SUCCESS

Dear colleagues,

The second topic of this Dgroup discussion on: "Taking stock of FSM progress", ran from Tuesday 1st of November till Monday 7th of November, we received 12 contributions from 10 countries (India, Bangladesh, Thailand, Malaysia, Uganda, Switzerland, Netherlands, Australia, Uganda, Mozambique and the US), and I promised to make a summary of that. Sometimes I wonder why I promise such things ☺

Making a summary was not easy because a lot of what you have written is correct and important, and can't be omitted. The truth about urban sanitation planning and FSM planning is diverse and messy. On the one hand we want and need good quality plans leading to good quality implementation, and we need that yesterday. As Han Heijnen wrote: for our health, for our environment and for our purse. On the other hand, the political reality is that you cannot make high quality participatory plans if the participants know very little and have little interest in sanitation (let alone on-site) and we ourselves -as a sector- do not even have the necessary rules of thumb!

So, let me present below the main points of the discussion, organised along the lines of the 3 guiding questions:

1. What do you see as the main objectives of urban sanitation planning and do you feel these are achieved in practice in your country? (why/ why not?)
2. What do you see as the relative merits of different city sanitation planning approaches?
3. Do you think that specific FSM plans should be made?

Needless to say that this summary does not do justice to the entire conversation and that you do need to go back to the original contributions to fully understand.

Best,
Ant.

2.1 WHAT DO YOU SEE AS THE MAIN OBJECTIVES OF URBAN SANITATION PLANNING AND DO YOU FEEL THESE ARE ACHIEVED IN PRACTICE IN YOUR COUNTRY? (WHY/ WHY NOT?)

The different contributors shared different levels of objectives of sanitation planning, ranging from creating political will, awareness, capacity, to having a good plan, to having a structured approach for city sanitation, to ultimately influencing health, well-being, environment and economics. For example, A.K. from India mentions 4 ultimate goals, including a healthier living environment, eradication of open defecation, safe FSM, rehabilitation of sewer and management of grey water. India is making progress on many of these areas, but specifically on FSM there are no data.

Prit Salian based in Uganda writes that the objective of planning is simply the plan, but of course the plan is not the end-goal of engaging in urban sanitation. He asks where the post-plan efforts are, considering that a consistent implementation is needed over 15-20 years, this means beyond the life span of the political bodies engaged.

Juliet Willetts writes that planning is a process, a means to an end. However, in urban sanitation planning, it's often overly detailed and technocratic, not taking into account the capacity of uptake by the people who are

expected to implement the plan. She suggests that we should give more attention to the political context in which we plan, the incentives and see what is required to get meaningful participation.

Overall there are a lot of question marks as to whether current planning is achieving the above objectives.

2.2 What do you see as the relative merits of different city sanitation planning approaches?

When opening this discussion, I assumed that most of you are somewhat familiar with different approaches to urban sanitation planning (beyond the traditional master plan). This may have been a little bit optimistic and though I do not want this to become a literature review, I have included below the steps of the SSK, CSPs, CLUES and Sanitation 21 as a reference. Of course, there are many variations and approaches have evolved, you will need to research the methodologies to fully understand. The main point here is that in any implementation of a city sanitation planning process you will need to make choices, because resources and time are always limited. While there is a lot of overlap between approaches, there are also key differences. For example, in the previous topic there was mention of the importance of geo-spatial information. Sahidul from Bangladesh also mentioned the importance of zonification. In the approach by CEPT (not in the table), and also in the contribution by Prit, an important step is understanding municipal finance and financial health. As Prit writes, sanitation plans have more value if they can be rooted into the day-to-day government activities and budget. This emphasis on municipal finance is not as prominent for example in the FSM planning from A to Z by EAWAG, shared by Christoph Lüthi and Philippe Reymond from Switzerland. Horacio Quembo shares the experience from Mozambique and mentions pro-active dissemination of plans as an important aspect which is not so prominent in other planning approaches.

Many of you, including Christoph and Philippe, also pointed out that a city sanitation plan needs strategic and critical thinking. That's it's much more than just going through a number of steps. In the Indian CSP's, as Sujaya Rathi from India writes, the problem is that the methodologies are defined, but implemented by consultants with a lot of variation in quality. Many CSP's lack attention to FSM, a perspective on environmental sustainability and vulnerable user groups. She writes that informed choice of technologies is hard to realise if the knowledge base is limited. Prit adds that in the CSP's often the incentive to make the plan is wrong (making the plan because there is investment) and it becomes an "adhoc and unrealistic wish-list". Sjoerd Kerstens from the Netherlands writes that in the Indonesian experience the incentives were created by providing both facilitation and funding, though this was later questioned by other contributions.

Dorai Narayana from Malaysia shares a very interesting account of the key elements of the Malaysian city sanitation planning approach. The approach was top-down with strong regulatory, institutional arrangements and a strong policy push, investments etc. The strategy accepted that on-site and off-site systems would co-exist in many areas, and often co-managed. The approach was incremental, starting with simple and robust systems, and this is also Dorai's recommendation for planning. A conscious choice was made that public health targets came before water resource protection. Not setting the standards too high, nor expecting full cost recovery from the start, but a consistent (and persistent) incremental approach. Other important elements were the separation of roles and an outcome based assessment of progress.

An incremental approach is echoed by Juliet, speaking on the Indonesian experience among others. Like Prit, she points to the fact that city sanitation plans are made within a context, and that this context often determines the chance of "success" rather than the steps of the plan. For example, what level of autonomy does the city authority have, is there a base level knowledge about urban sanitation, is there political will, is there capacity to balance short term and long term needs. If such conditions are not in place -and often they aren't- the exercise becomes a tick-of-the-box exercise. Juliet also pointed out that our subsector is information poor because it is new. We do not have sufficient rules of thumb to make decisions easier and quicker at the local level. This means that the best way forward is to be very pragmatic in planning and go through incremental cycles of learning.

2.3 DO YOU THINK THAT SPECIFIC FSM PLANS SHOULD BE MADE?

To my surprise this was actually the easier question, and though people said yes & no, there was a level of consensus.

In general there is an understanding that town plans should integrate sanitation plans, or that urban sanitation plans should be embedded in town planning; and that in turn sanitation plans should integrate FSM plans, or that specific FSM plans should follow from urban sanitation plans and be embedded. The fear is, however, that FSM is mainstreamed away and in practice will disappear. This is also what Sujaya sees in India, that in practice a number of things are not done with sufficient depth and remain an inconsequential exercise in the urban sanitation plan. She advocates for a clearer urban sanitation framework. Also Prit asks for clearer national level evaluation criteria of urban sanitation plans, and AK suggests that State Level Sanitation Strategies can help to provide direction. Both Sahidul and Juliet suggested good zonification, to make sure that decision to implement certain solutions in specific areas is based on a good evaluation of alternatives. Even in some cases, it will become clear that FSM is not appropriate, e.g. above a certain population density and with problematic quality of septic tanks, high ground water and so on, piped systems may be the better alternative.

Last but not least, a lot of planning is investment-centred and as a result focusses on the treatment plant which is often the biggest investment. Yet numerous experiences show that the biggest operational challenge in FSM is the quality of the on-site facility and the sourcing of sludge or septage. Disproportionate attention to the treatment plant, risks putting that system perspective in the background.

2.4 DIFFERENT APPROACHES TO URBAN SANITATION[1]

	Indonesian urban sanitation strategies (SSK)	**Indian urban sanitation plans (CSP)**	**Community-Led Urban Environmental Sanitation Planning (CLUES)**	**Sanitation 21**
Implemented by	Indonesian government	Indian government	NGO's	Everybody (more principles)
Implemented in	About 450 cities and towns in Indonesia	India, at least 250 cities.	7 small towns in Asia, Africa and Latin America (perhaps more now)	As it is a framework, there is no direct implementation/ testing
Focus	City wide planning, in some cases expanding to district-wide plans	City wide sanitation planning and state sanitation planning	Low-income households and neighbourhoods	City wide planning and national guidance
Sanitation definition	Solid waste, drainage and human waste	Solid waste, drainage and human waste	Water supply, sanitation, solid waste management and storm drainage.	Depending on local priority, but focus on human waste
Steps	• For the White book: 1) Internalization and Building Common Perception/Understanding 2) City Profile Assessment 3) Sanitation Assessment and Mapping 4) Sanitation Risk Area Assessment 5) White Book Finalization • For the City Sanitation Strategy: 1. Sanitation development framework 2. Strategy formulation 3. Preparation of programme and activities 4. Finalization of the city sanitation strategy	1. Constitute a multi-stakeholder City Sanitation Task Force: • with suggested members • defined responsibilities • appoint a City Sanitation Implementing Agency for the CSP for the city (preferably the local body) • Recommend assigning of permanent responsibilities for 2. Baseline Data Collection and Creating Database/GIS led by City san implementating agency contacted out to service providers (NGO's, consultants) 3. Awareness Generation and Launch Of 100% Sanitation Campaign 4. Specifying Legal and Regulatory Institutional Responsibilities 5. Planning and Financing 6. Implementation Management and Monitoring & Evaluation Other points of attention are: • Technology choice • Reaching the Un-Served Populations and the Urban Poor • Operation & Maintenance and Service Delivery Systems • Capacity Building & Training • Mon	1. Process Ignition and Demand Creation 2. Launch of the Planning Process 3. Detailed Assessment of the Current Situation 4. Prioritisation of the Community Problems and Validation 5. Identification of Service Options 6. Development of an Action Plan 7. Implementation of the Action Plan	1. Define the institutional framework for service delivery 2. Understand the existing context 3. Derive strategies for sanitation system improvement 4. Formulate appropriate management arrangements 5. Prepare for implementation

[1] This overview was made for the 2013 learning event in Indonesia on urban sanitation planning.

SUMMARY TOPIC 3: FINANCING FSM INFRASTRUCTURE AND SERVICES

Dear colleagues,

Over the past 7 days, we received 6 contributions from 6 countries (India, Bangladesh, Malaysia, Rwanda, Mozambique and Indonesia) on the third and last topic of this Dgroup discussion "Taking stock of FSM progress". Below you can find the summary of this discussion.

The discussion questions were as follows:

1) What are your key assumptions when working on urban sanitation finance in your context? (for hasty people and others)
2) In your context, what do you see as the most viable and sustainable way to raise money for FSM services from users? For example, pay-per-use or a flat monthly contribution? Why?
3) What should be done to support more cities and towns to overcome the upfront (infrastructure) investment barrier in setting up FSM services?

As always, I apologize for any missing detail or other erroring the summary and encourage you to go back to the original posts.

Best,
Ant.

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3.1 WHAT ARE YOUR KEY ASSUMPTIONS WHEN WORKING ON URBAN SANITATION FINANCE IN YOUR CONTEXT?

ASSUMPTION 1: WE ASSUME THAT FROM THE START, WE WILL HAVE TO COVER ALL COSTS OF DAY-TO-DAY OPERATIONS AND INTERMITTENT MAINTENANCE THROUGH TARIFFS

Basically, everybody disagreed with this assumption, and 3 disagreed strongly. The only person that agreed said that this would be in principle, but that some external inputs will be needed. There were 3 types of arguments. Firstly, that it is unrealistic, because organisations need to build up their cash flow and building up willingness-to-pay also requires time. It was said that this would lead to failure. The second argument was that this is a public good, and there is a high (public) return on investment. For this reason, we need governments to be prepared to cover recurrent costs. We should also expect beneficiaries (tourism, landscape) to pay, not only the users of sanitation services. And the third argument was around equity; capacity to pay varies widely.

ASSUMPTION 2: WE ASSUME THAT THE FSM SERVICES (EMPTYING AND TREATMENT) WILL ALWAYS REQUIRE SOME LEVEL OF GENERAL TAX MONEY TO COVER ITS DAY-TO-DAY COSTS AND INTERMITTENT MAINTENANCE

While in the first assumption the question was whether additional funding would be needed at the start of services, this assumption stated that additional fund would be needed for ever after in the future. Yet, 5 out of the 6 contributors agreed with the statement, one of them saying that it would be ideal but take many many years. One suggested that gradually one could move to a situation where tariff would cover both emptying and treatment. I guess it is hard to predict the future…

ASSUMPTION 3: WE ASSUME THAT WITHIN 5-10 YEARS, THE SERVICE WILL HAVE TO BE FULL-COST RECOVERY, INCLUDING INITIAL (INFRASTRUCTURE) INVESTMENT COSTS

The assumption 3 went further than the assumption 2, stating that not only the day-to-day costs should become full cost recovery, but also that funding should be generated to replace infrastructure. Everybody

outright rejected this idea as absurd. First of all, the period of 5-10 years is unreal, even for wealthier countries, unless we are talking about very basic infrastructure investments. Secondly, if we set tariffs and taxes to that level, we'll have a bit problem of willingness to accept the services. Including in some countries, people still feel that sanitation services should be free. Reference was made to the Netherlands where infrastructure was granted by the central government.

Assumption 4: We assume that within the coming 5-10 years, revenue from re-use products will cover a significant part of our costs of day-to-day operations.

Two people said that do not know, three people said definitely not, and Ashley Muspratt from Pivot Works said: yes, in our modelling, it is possible to cover the operating costs of our Pivot works factory (producing fuel) if the scale is big enough. For smaller systems it is unlikely. It would not cover the emptying costs. All other contributors stated that they have not yet seen revenue from re-use products in practice covering a significant part of costs. Dorai Narayan from Malaysia added that this is also related to the demand, acceptance and quality of re-use products.

Assumption 5: We assume that major infrastructure investment in our city/ cities will be covered from central government transfers or donor grants

While everybody strongly agreed that major infrastructure investments need to be covered by central government or donor grants, Horacio Quembo from Mozambique explained that in his country the allocation of funding for sanitation from central government is still a challenge.

Assumption 6: We assume that replacement and upgrading of infrastructure will be covered from central government transfers or donor grants.

Here we have a divided answer. Three contributors expect that replacement and upgrading can be funded from the local level by gradually increasing fees, improving operational efficiency of the service, good maintenance, raising other municipal revenues. The other three state that this will always need to come from transfers from the central government, for example from general taxation.

Assumption 7: We assume that private sector will deliver services at a lower costs than local authorities

Three contributors agree, one disagrees and two say it depends on the context. The expectation is that private sector can provide services at a lower costs and better quality. Local government rarely has the training, systems and staff to reach higher operational efficiency. The latter comment is especially related to the operation of the treatment plant, not the entire service chain. However, private sector will only be pushed to improve if there is competition, if it is a monopoly situation, there costs can even be higher. In urban sanitation, private sector is often thriving on the inefficiencies of the local government service. Another aspect is of course that there is often no level playing field if the private sector needs to compete with local government provided services.

I think that it is important to observe that you have painted a sobering picture regarding financial viability of services. There are many overly optimistic stories, but evidence so far encourages us to be cautious in our assumptions.

3.2 In your context, what do you see as the most viable and sustainable way to raise money for FSM services from users?

Abdullah Al-Muyeed from Bangladesh suggests that payment-per-use is the most viable option for municipalities, because raising tax or surcharging the water bill is politically very sensitive.

Others suggest that payment is best done as tax or surcharge of water bill because it's a public good. Therefore, as Dorai says, it's better to decouple payment from use. The tax or surcharge would entitle the user to a certain number of emptying services per year, additional service could be paid. Decoupling payment from use also opens the way for scheduled desludging which is more efficient and better meets environmental objectives.

Due to the lack of information in the sector, there is often no basis for the height of a fee, tax or surcharge for desludging. Mees van Krimpen in Indonesia suggests that a basis fee for different service categories (residential, business, hotel) should be set, and that this should be based on a comprehensive septic tank survey which determines your customer data base and volume among other things. However, Abdullah shares that they have moved away from different service categories because it led to corruption and often the application of categories was not straightforward.

Ashley turns the question around, and asks how get users of re-use products to pay for the product. Her experience is that larger industries are preferable because they require less marketing and sales effort. Her business has opted for fuel, because users are close to the production, the demand is not seasonal and the volume demanded is much higher than they can produce. Moreover, sensitivities about the product coming from human waste are much less than for agricultural re-use.

3.3 What should be done to support **more** cities and towns to overcome the upfront (infrastructure) investment barrier in setting up FSM services??

Of course the answer to this question is very context specific and that was reflected in your contributions. Mees who is involve in supporting local governments in Indonesia to update and implement their SSK's, shares that their approach is "rigorous advocacy", putting information on the actual situation under the noses of decision makers and technicians, ensuring the mayor frames his/her commitment in an official instruction to his staff.

Abdullah holds high hopes for the IRF in Bangladesh, which will allow municipalities to include FSM in their budgets. Doria suggests that we should start with basic systems and generally improve, and Ashley suggests dramatically less expensive treatment plants.

Ashely would love to see OBA linked to infrastructure performance (not just construction) and asks whether social impact bonds could play a role in linking finance with desired outcomes and impact. However, Mees points out that it is not all a question of availability of resources. Often resources remain underutilised due to stringent readiness criteria that municipalities cannot fulfil or pre-finance requirements in OBA schemes for which they do not have the cash. More knowledge of how such finance and incentive schemes work out in practice is needed. Abdullah asks for less criticism and more learning, which seems a very appropriate ending of this Dgroup discussion.