

SFD Lite Report

Mymensingh Bangladesh

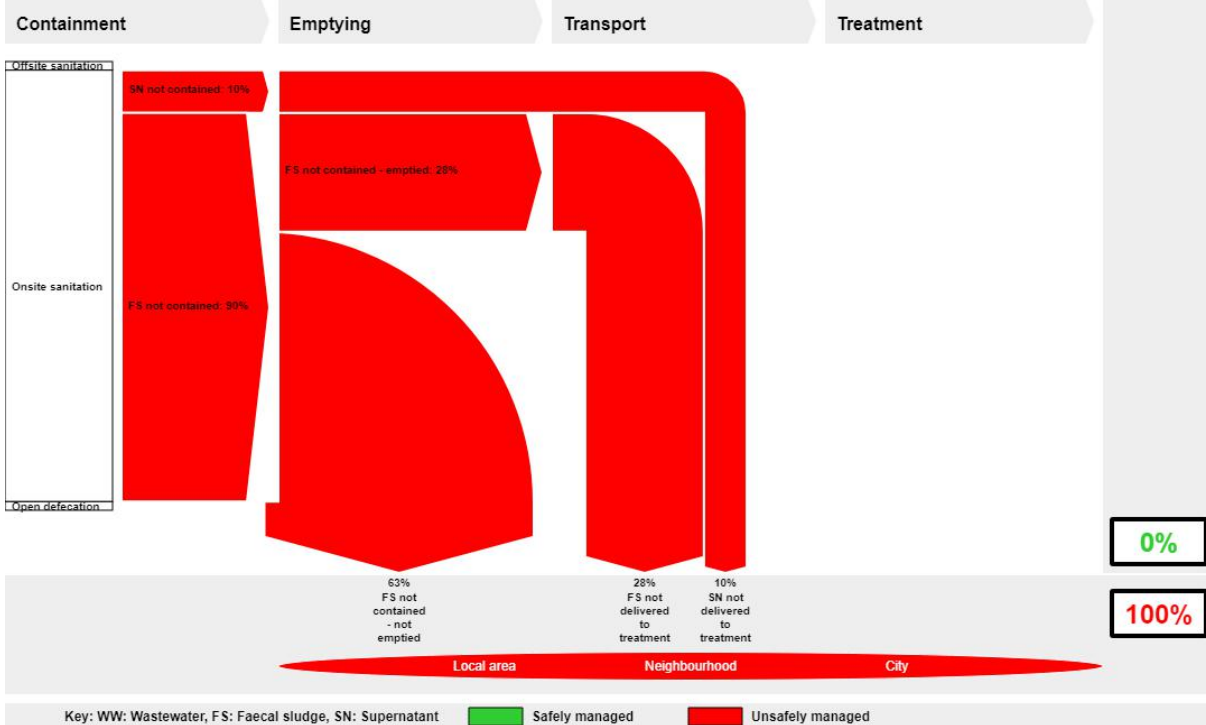
This SFD Lite Report was prepared by
WaterAid Bangladesh

Date of production/ last update: 28/12/2018

1 The SFD Graphic

Mymensingh City Corporation, Mymensingh, Bangladesh
Version: Reviewed
SFD Level: not set

Date prepared: 28 Dec 2018
Prepared by: WaterAid



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

2 SFD Lite information

Produced by:

The Flow Diagram (SFD) for Mymensingh was created through desk-based research by the WaterAid country programme in Bangladesh using the SFD Graphic Generator on the SuSanA website.

Collaborating partners:

Mymensingh City Corporation and WaterAid Bangladesh

Date of production: 28/12/2018

3 General city information

Mymensingh is one of the districts of Mymensingh division and is bordered on the north by Meghalaya state of India and Garo Hills, on the south by Gazipur district, on the east by districts of Netrokona and Kishoreganj, and on the west by districts of Sherpur, Jamalpur and Tangail. Mymensingh town is the district headquarters. The district covers an area of 4,363.48 sq.km and consists of several small valleys between high forests.

Mymensingh is governed by Mymensingh City Corporation which comprises of 21 wards. According to data from 2017 the total population of Mymensingh City Corporation is about 478,889 (Male- 217,132 and Female- 239,469), the population density is 1,163/Sq Km and the annual growth rate is 1.28%. Average minimum temperature of Mymensingh town is 11.8°C and average highest temperature is around 33°C. It is located in an area of relatively high rainfall with the annual rainfall ranging from 1,711 mm to 4,166 mm (average 2,666 mm). Mymensingh City Corporation (MCC) provides supplied water in many of its areas and those out of water supply network depend on their own sources for collecting water.



Figure 1: Map of Mymensingh City Corporation

4 Service outcomes

Mymensingh City Corporation, Mymensingh, Bangladesh, 28 Dec 2018. SFD Level: not set

Population: 500000

Proportion of tanks: septic tanks: 74%, fully lined tanks: 77%, lined, open bottom tanks: 86%

System label	Pop	F3	F4	F5	S4e	S5e
System description	Proportion of population using this type of system	Proportion of this type of system from which faecal sludge is emptied	Proportion of faecal sludge emptied, which is delivered to treatment plants	Proportion of faecal sludge delivered to treatment plants, which is treated	Proportion of supernatant in open drain or storm sewer system, which is delivered to treatment plants	Proportion of supernatant in open drain or storm sewer system that is delivered to treatment plants, which is treated
T1A2C6 Septic tank connected to open drain or storm sewer	28.0	50.0	0.0	0.0	0.0	0.0
T1A2C7 Septic tank connected to open water body	3.0	50.0	0.0	0.0		
T1A2C8 Septic tank connected to open ground	2.0	50.0	0.0	0.0		
T1A2C9 Septic tank connected to 'don't know where'	14.0	50.0	0.0	0.0		
T1A3C6 Fully lined tank (sealed) connected to an open drain or storm sewer	6.0	50.0	0.0	0.0	0.0	0.0
T1A3C7 Fully lined tank (sealed) connected to a water body	1.0	50.0	0.0	0.0		
T1A3C8 Fully lined tank (sealed) connected to open ground	2.0	50.0	0.0	0.0		
T1A3C9 Fully lined tank (sealed) connected to 'don't know where'	4.0	50.0	0.0	0.0		
T1A4C6 Lined tank with impermeable walls and open bottom, connected to an open drain or storm sewer	9.0	50.0	0.0	0.0	0.0	0.0
T1A4C7 Lined tank with impermeable walls and open bottom, connected to a water body	1.0	50.0	0.0	0.0		
T1A4C8 Lined tank with impermeable walls and open bottom, connected to open ground	2.0	50.0	0.0	0.0		
T2A2C5 Septic tank connected to soak pit, where there is a 'significant risk' of groundwater pollution	8.0	0.0	0.0	0.0		
T2A5C10 Lined pit with semi-permeable walls and open bottom, no outlet or overflow, where there is a 'significant risk' of groundwater pollution	20.0	0.0	0.0	0.0		

Table 1: SFD Matrix for MCC

The percentages presented in Table 1 are based on data collected through key informant interviews and focus group discussions.

The majority of the population in MCC use septic and fully lined tanks (68%), and around 32% use toilets with pits. There is no open defecation found in the City Corporation. The 68% of the population using septic and fully lined tanks are distributed as follows: septic tanks connected to open drain or storm sewer (T1A2C6, 28%); septic tanks connected to open water body (T1A2C7, 3%); septic tanks connected to open ground (T1A2C8, 2%); septic tanks connected to 'don't know where' (T1A2C9, 14%); septic tanks connected to soak pit, where there is a 'significant risk' of groundwater pollution (T2A2C5, 8%); fully lined tank (sealed) connected to an open drain or storm sewer (T1A3C6, 6%); fully lined tank (sealed) connected to a water body (T1A3C7, 1%); fully lined tank (sealed) connected to open ground (T1A3C8, 2%) and fully lined tank (sealed) connected to 'don't know where' (T1A3C9, 4%).

Pit latrines are used by 32% of the total population of the city corporation. While many different types of pit latrines are constructed within the city, two common types of containment structure could be identified. The majority of these are lined pits with semi permeable walls and an open bottom with no outlet or overflow (T2A5C10, 20%) and lined tanks with impermeable walls and open bottom connected to open drain or storm sewer (T1A4C6, 9%), open ground (T1A4C8, 2%) and to a water body (T1A4C7, 1%).

The SFD assessment has shown that 100% of the excreta generated in the city are “unsafely managed”. Of the excreta generated, 10% is supernatant and 90% is faecal sludge. Both parts are not contained and end up being discharged to the environment untreated. 63% of population’s excreta are eventually discharged into the environment from the systems and the remaining 28% of the population has emptied their tanks and pits at least once in the last 3 years. An interesting information was found here that septic tanks connected to soak pits and lined pits with semi-permeable walls and open bottoms in this area have not been emptied any single time (FGD, 2018a; FGD, 2018b). This can be attributed to the fact that due to open bottom of the pit, and infiltration capacity of the soil, septic tanks and pits have not been full since they were constructed. And people are not used to empty them until they are full. However, the emptying of pits and septic tanks is undertaken by private sweepers through a manual process where it is done. Mymensingh has no sewer system or sewerage treatment plant (KII1, 2018). Faecal sludge is discharged at the open drain or surrounding ditches or transported and discharged into the dumpsite. The dumpsite receives all waste from the city (organic, inorganic, solid and faecal sludge) coming from industries, households, public and private institutions. It is simply an open field, with no protection or appropriate design details for the handling of wastes.

People in Mymensingh City Corporation get their water either from the municipal supply or from their own source. The most common water production technology is protected wells. Lateral separation between sanitation facilities and water sources varies from one place to another but generally the percentage of sanitation facilities that are located less than 10m from water sources is greater than 25%. A lot of people who are outside the municipal water supply, rely on groundwater. It is estimated that there is significant risk of groundwater pollution in the city.

5 Data and assumptions

A variety of data sources were used to determine the most reasonable estimates of percentages of excreta flow for the SFD matrix. In addition to the published national level WaSH policy and implementation documents, transect walks, observations, key informant interviews and focus group discussions were used for data collection purposes as there were limited data available in the secondary sources.

The proportion of FS in tanks and pits was selected based on the relative proportion of the people using those systems according to the guidance given in the FAQ section of the SuSanA Webpage. That means that the FS content in septic tanks, fully lined tanks (sealed) and lined tanks with impermeable walls and open bottom and all types of pits was set to 74%, 77% and 86%, respectively.

6 List of data sources

- District Statistics 2011, Mymensingh.
- IRF, 2017. Institutional and Regulatory Framework for FSM.
- KII1, 2018. Interview with Mr. Mohabbat Ali, Conservancy Inspector, MCC.
- KII2, 2018. Interview with Mr. Dipok Majumdar, Sanitary Inspector, MCC.
- FGD, 2018a. Focus group, discussion with sweepers. (manual empty)
- FGD, 2018b. Focus group discussion with toilet users. (household)