



Dhaka WASA: Governance Challenges and Way forward

Executive Summary

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1. Introduction

1.1 Background and Rationale

Safe water and sanitation are essential for public health. Access to water is a basic human rights.¹ Water is invaluable for human survival, household activities, industrial production and environmental sustainability. The National Water Act 2013 provides that the right to potable water, and water for hygiene and sanitation shall be treated as the highest priority.² Moreover, the Sustainable Development Goal (SDG) 6 and 7th Five Year Plan of Bangladesh have made the commitment to ensure sustainable water and sewerage system and availability of water.

Dhaka is the most densely populated city in the world³. The density of population in the city is 47,400 people per square km. Now, the total population in Dhaka city is about 17 million and the annual population growth rate is 3.72 percent. Along with other citizen amenities, safe water supply has emerged as a challenge due to the growing population of the city. Dhaka Water Supply & Sewerage Authority (DWASA) was established in 1963 as an independent body with the mandate of providing water supply and developing sewerage system for the city dwellers. In 1990, DWASA extended its coverage to Narayanganj city. The activities of Dhaka WASA have been well defined by the Water Supply and Sewerage Authority Act 1996. According to this act, DWASA is now operating as an autonomous body with corporate culture in its management and operation. Total area coverage of Dhaka WASA is about 360 KM covering Dhaka and Narayanganj cities.⁴

Since its inception Dhaka WASA has been facing various problems and challenges to fulfill water and sewerage service related demands of the growing population of Dhaka and Narayanganj cities. Various types of irregularities and mismanagement including water crisis, mismanagement in sewerage system and water logging have been revealed in different research works and newspapers.

Water sector is one of the priority sectors of Transparency International Bangladesh (TIB). TIB conducted a number of research works on water sector, which include Chittagong WASA (2007), Baseline Study on Water Sector Integrity (2014), Saving the Mayur River and Connected Channels (2015) and Effectiveness of Effluent Treatment Plants (ETPs) in Garments Industry of Bangladesh: A Water Sector Integrity Perspective (2017). The Baseline Study on Water Sector Integrity included narrowly the Dhaka WASA as one of the major water supply authorities, which was not sufficient to provide a broader governance scenario of this authority. As a result, the demand for a full-fledged research on good governance in DWASA arises. Therefore, TIB conducted the study entitled “Dhaka WASA: Challenges of Good Governance and Way Forward”. This study is expected to contribute to making DWASA a more service-oriented and effective organisation.

1.2 Objectives

The main objective of this study is to find out governance challenges of Dhaka WASA as well as the way-forward to overcoming the challenges.

The specific objectives are:

¹ The National Water Policy 1999, Ministry of Water Resources, Peoples Republic of Bangladesh

² The National Water Act 2013, Ministry of Water Resources, Peoples Republic of Bangladesh

³ Demographia world Urban Areas 2018

⁴ Dhaka WASA 2016

1. To review the legal frameworks of Dhaka WASA;
2. To identify institutional limitations and challenges of Dhaka WASA to ensure water and sewerage services;
3. To measure the satisfaction and experiences of Dhaka WASA service recipients.

1.3 Scope of the Study

This study covers water and sewerage services provided to residential, commercial, industrial and Low Income Communities (LICs) i.e. slum areas in 10 among 11 MODS zone of Dhaka WASA. The study also includes sewerage and drainage system, water logging situation and role of Dhaka City Corporations (South and North). This study was conducted from April 2018 to March 2019. A sample survey of the service recipients was conducted from 1st August to 14 August 2018. The reference period of data used in this research is 2010-2018.

2. Methodology

This is a research of mixed methods. Both qualitative and quantitative research methods were applied in this study. Relevant data were collected from both primary and secondary sources. Collected data were used in the report after proper verification and analysis. The methods applied in this research to collect primary data include Key Informant Interview (KII), Sample Survey and observation. The sources of secondary data include relevant research articles, reports, books, laws, circulars, news published in the media.

The respondents of the KIIs were Dhaka WASA board members, Ex and regular officials (Head office and MODS Zones); relevant officials of Dhaka City Corporations (North and South), Implementation Monitoring and Evaluation Division (IMED) relevant officials, water experts, civil society members, journalists, owners/managers/caretakers of residential, commercial and industrial institutions. A checklist was used for conducting the KIIs.

For the sample survey, multi-stage sampling techniques were used. However, multi-stage cluster sampling procedures were used in identifying residential and commercial connections. For the residential and commercial connections, 70 and 72 areas were selected respectively from 284 areas of 10 MODS zones. The number of selected areas were determined proportionately and the samples were selected from the MODS zones randomly. In the residential connections, each selected area was divided into one or more clusters comprising of 72 connections. From the selected areas, one cluster was selected randomly and from the 72 connections, 24 service recipients were selected by using systematic random sampling (one after every three connections). For the commercial connections, eight service recipients were selected randomly from each area of the commercial connections from the list provided by Dhaka WASA. For the industrial connections, 72 connections were selected from a total 163 industrial connections located in seven MODS zones. For the LIC connections, seven slums were selected randomly from the list of 13 slums provided by Dhaka WASA. Then 500 service recipients were selected proportionately from the selected slums. Finally, 2,828 service recipients were selected for the survey. During the survey, 60 service recipients were either absent or denied to respond. Therefore, the survey data were collected from 2,768 service recipients.

The analysis of data for this study followed some indicators of good governance such as transparency, accountability, participation, equity, capacity, rule of law and control of corruption.

3. Positive initiatives and achievement of Dhaka WASA (according to Dhaka WASA information)

- Implementation of Dhaka WASA Turn Around Programme to increase institutional capacity and expedite services
- Reduction of system loss – from 40% in 2010 to 22% in 2016
- Increase of revenue collection – from 64.5% in 2008 to 95% in 2016
- Making the bill related information available through website, opportunity to pay bill through mobile phone/credit card/bank, digital billing system in some locations
- Introduction of round-the-clock complaints mechanism – a hotline (WASA link 16162) was introduced in 2013
- Setting up district metered areas (DMAs) in 47 areas out of 141 service areas in 11 MODS zones.
- Providing water connections to slum areas of Dhaka city and formation of separate division named Community Programme and Consumer Relations (CPCR) in this connection.
- Introduction of ATM booth in 2016 to retail water supply – a total 80 water ATM booths were established
- Initiating projects for reducing dependency on ground water and resolving water logging problem in Dhaka city.

4. Research findings

4.1 Legal limitations

There are some limitations in relevant laws of Dhaka WASA. Notable limitations among them are: (a) absence of specific recruitment criteria such as educational qualification, age, experience etc. for the recruitment of contractual positions such as managing director, deputy managing director and advisors; (b) absence of rules of general conducts and disciplines for the contractual and part-time employee; (c) absence of directives for taking feedback and opinion of service recipients while determining water tariff; and (d) absence of directives for introducing progressive tariff system. Due to the absence of well-defined recruitment criteria there are some risks of irregularities and corruption as well as undue political interference in the recruitment of contractual position. Moreover, the absence of conduct rules leads to the lack of accountability of the contractual and part-time employees. Again, the absence of directives for taking users' feedback may lead to neglecting the opinion service recipients in determining price of water. Furthermore, without progressive tariff system, it is difficult to ensure equitable water supply for the poor city dwellers.

4.2 Institutional limitations and challenges

Shortages of human resources: There are shortages of human resources in Dhaka WASA compared to the positions determined in the Dhaka WASA organogram. In Dhaka WASA, 3249 staff are working against the sanctioned positions of 4667, which means that overall 31 percent of posts are vacant. According to the category of the posts, 30 percent of third class and 35 percent of fourth class positions are vacant. At the same time, since 2016 three

positions of deputy managing directors (operation maintenance; research planning and development; and finance) are vacant. Moreover, in lieu of 21 approved posts, 6 positions are vacant in training centre. Furthermore, there is a shortage of human resources in the CPRC division. For a smooth operation of 806 active pumps, around 2400 posts of pump operators are required in Dhaka WASA. However, there are only 452 pump operators who are serving for 806 pumps. This shortage of operators creates some problems. For example, some pump operators claim illegal overtime money due by taking opportunities of this shortage of operators. Again, there are 140 posts vacant against 310 approved revenue inspectors. Consequently, in both positions there are allegations of recruiting assistants (DUBLI) illegally.

Shortages of logistics: In the MODS zones there are less number of vehicles compared to the needs. The vehicles are necessary for effective maintenance, monitoring and supervision of MODS zone activities. There are also shortages of water carrying vehicles used for ensuring emergency water supply. Where there is a need for a minimum of 6 water vehicles for each MODS zone, now there is only 3 water vehicles on an average.

Gaps in information management: Management Information System (MIS) and Dhaka WASA official website (www.dwasa.org.bd) are the main mediums of information management in Dhaka WASA. There are deficiency and weakness in the systems of information management and disclosure of information. Various information i.e. MODS wise manpower, service recipient list, area coverage and locations, information on pump-wise water production are not preserved in a combined manner managed through a central point. Moreover, there are gaps in uploading updated audit reports, annual reports and others report on the website. The last report published in the website is the annual report for the period of 2015-2016. Furthermore, the updated organogram, ACC's hotline number etc. are not provided with in the website. Besides, some links such as national information portal, MIS, social media link given in the website was found to be not working. Moreover, the information on how to get new connection, transfer of connection, add more connections and to close connections are not provided with in a comprehensible manner.

Deficiencies in providing authentic information: There are deficiencies in providing authentic information on different statistics such as total water demand in the city, total coverage of sewerage services, area coverage of a pump, etc. According to Dhaka WASA, the total water demand in Dhaka city is about 2300 million litre. However, considering the present population of Dhaka city, the total demand of water in the residential connections is 2580 million litre. Additionally, there is a mismatch in providing accurate information on the sewerage coverage area under Dhaka WASA. Dhaka WASA has been claiming since 1990 that the total sewerage coverage of the authority is about 20 percent. However, in claiming such a coverage the authority neither considers the increased population and areas of Dhaka city nor the construction of no sewerage lines since 1990. Moreover, Dhaka WASA does not have the exact information on the daily water production by each pump apart from the DMA areas.

Slow implementation of projects: There is a tendency of slow implementation of development projects in Dhaka WASA. Some projects were initiated in 2010, however, were not completed within the planned timeframe. For example, the Padma-Jasholdia Water Treatment Plant was undertaken in 2013 and planned to complete in 2016. However, the project was extended for two times and finally set the deadline for June 2019. Again, the Sayedabad Water Treatment Plant (Phase-3) project was initiated in 2015 and planned to complete by 2020. However, only 2 percent activities of the project were completed by the

end of 2018. On the other hand, the Tetuljhora-Vakurta Wellfield Project was initiated in 2012 and planned to complete by 2016 but was found incomplete at the end of 2018. Moreover, the Gandhorbopur Water Treatment Plant was initiated in 2013 and planned to complete by 2022 but only 20 percent progress of the project activities was found done at the end of 2018. Deficiencies of efficiency and capacity in planning, management, monitoring of project activities along with irregularities and corruption are the major causes of the delay in project implementation.

Capacity constraints to reduce system loss: System loss remains one of the major challenges in Dhaka WASA. Weak internal control, monitoring and accountability help sustain the system loss. Some significant causes of system loss include undue nexus between metre readers and service recipients in billing, selling water in undue processes, giving illegal water connection, leakage in distribution line, reduction of water production capacity of the pumps etc. The system loss leads to the failure of Dhaka WASA to collect expected amount of revenue against the water supply.

Gaps in public participation and getting long term solutions from public hearing: Public participation is not ensured in determining water price. It is mentionable that the Anti-Corruption Commission (ACC) arranged two public hearings on Dhaka WASA MODS zone 4 and 10 on 14 March 2018 and 6 May 2018 respectively. Some notable complaints raised by the WASA service recipients in the public hearings are irregular water supply, stink in water, claiming bribe in settling due bills, charging ghost bill etc. It is important to mention that same types of complaints were raised in both of the public hearings as Dhaka WASA failed to provide along term solution against the complaints.

Weak monitoring system: There are gaps in monitoring of the work of field level staff such as revenue inspectors and pump operators. Deficiencies of regular monitoring of the work of above mentioned posts create various types of irregularities and corruption such as billing without metre reading, extra billing, undue nexus in settling bills, absence of pump operators in duty station, illegal appointment of assistants (DUBLI) etc.

Gaps in effectiveness of WASA Board in ensuring internal accountability: According to the WASA Act, WASA Board is responsible to make the WASA management accountable. Moreover, the Board is responsible for making policy, appointing managing director and deputy managing directors etc. However, the WASA Board does not apply its legal power independently in many cases. Some significant causes of this problem include undue political pressure, imposing undue decisions by relevant ministry, and ignoring Board's decision by the managing director due to hidden political affiliation etc. Thus, the role of Dhaka WASA Board has become ornamental in making the WASA management accountable.

Coordination gaps with City Corporations: Dhaka WASA plays a role to coordinate with the Dhaka City Corporations (North and South) regarding management and repairing of drainage lines, sewerage line, waste disposal, water logging and road cutting permission. According to the data provided by Dhaka WASA, Dhaka WASA is responsible for managing the drainage lines of about 350 kilometers whereas around 2500 kilometers lines are managed by Dhaka City Corporations. According to the Drainage Policy 2005, the leadership of drainage management was entrusted to Dhaka WASA. However, there exists a coordination gaps between Dhaka WASA and Dhaka City Corporations (South and North) in drainage system management. The significant problems in this regard include that the City Corporation do not inform Dhaka WASA properly in the case of damaging WASA drainage systems during any development activities on the roads. On the other hand, Dhaka WASA alleged that they face difficulties to get road cutting permission from the City Corporations

when they plan for drainage management. In this context, an official of Dhaka WASA informed, "According to the law, these are Dhaka WASA's drains but the City Corporations manage the drainage systems arbitrarily. We repeatedly send letters to them, but they do not listen to us." In connection to the comment of Dhaka WASA official, an official of Dhaka City Corporation replied, "Why will we get permission from WASA, these are City Corporation's roads." Moreover, the coordination gap in waste management is another concern. Dhaka WASA is responsible for regular cleaning of drains and the waste of canals whereas the City Corporations are responsible for managing households' solid waste. It is alleged that both the Dhaka WASA and City Corporations tend to avoid their responsibility to clean the waste dumped in the drains or canals. As a result, solid or heavy waste dumped in the drains or canals obstructs the normal draining out of rainwater, which causes water logging in the city.

4.3 Capacity and effectiveness in providing water services

Deficits in developing sustainable and environment friendly water production system:

In order to develop a sustainable and environment friendly water production system by lowering dependency on ground water extraction, Dhaka WASA set a target that by 2021, the proportion of groundwater and surface water would be 70:30. However, in 2018, the current ratio is 22:78. Moreover, Dhaka WASA has been installing pumps for extracting ground water in an unplanned way, instead of increasing the sources of surface water and rainwater harvesting. In the last 10 years, the number of pumps has increased by double. The number of pumps was 482 in 2009, which turned into 900 in 2018. Due to the excessive extraction of ground water, water level is falling down by 2 to 3 metres per year. This also badly affects the aquifers of surrounding areas of Dhaka city.

Deficits of water supply against the demand: The minimum water demand of residential connections in Dhaka city is about 2580 million litres per day. However, Dhaka WASA claims that its capacity of water production is about 240 million litres per day. It means that there are deficits in meeting the demands. However, an official of Dhaka WASA argued, "Since there is no complaints about water shortage from the service recipients, it can be said that Dhaka WASA is good enough to meet the demands." Nonetheless, field survey data provide that there are deficits of providing water supply against the demand. According to the survey data, 44.8% service recipients do not get sufficient water to meet to their demand. The highest rate of not getting water according to the demand is prevalent in the slums and the rate is 71.9%. On the other hand, 45.8% residential connections, 34.9% commercial connections and 19.0% industrial connections do not get water according to their demand. The areas that reported water scarcity during the survey include Sutrapur, Jurain, Motijheel, Kadamtali, Chawkbazar, Hazaribagh, Islambagh, Nawabpur, Siddikbazar, Water Works Road, Barobag, Bagbari, Ahmed Nagar, Sheora Para, Farmgate, Rasulbag, Mothertek, Nandipara, Mohammadbag, Palashpur, Muradpur, Jagannathpur, Uttara-6, Ibrahimpur, Kachukhet, Manikdi, Mirpur 11, Nakhhalpara, Palashnagar, Vasantek and slum areas. Due to less water pressure in the supply line, 76.4% residential service recipients reported that they have to extract water from WASA line by using motor. The respondents reported that they face the crisis the most in summer (94.0%). Besides, 20.6% respondents reported that they face water shortage round the year.

Lack of equity in water supply and tariff system: Dhaka WASA Act provides that there is a provision of ensuring equity in determining water tariff, which is not followed in the real sense. The Act states that the authority can determine a lower rate of water tariff for the lower income communities (LICs). However, in reality, the service recipients in the slums are made

to pay at the same rate as determined for all residential connections. According to the experts, prices should be different depending on the use of water and the areas of residence. Moreover, the wastage of water can be reduced by determining water tariff on the basis of water uses. Besides, there is a complaint of not giving priority to the slum dwellers for solving their water supply related problems and emergency water supply. Moreover, consumers' opinions are not sought to determine the rate of water tariff. However, in the country, there is an example of determining tariff through public hearing in re-fixing the rate of gas and electricity tariff.

Water quality: In measuring the water quality of Dhaka WASA, the smell and colour of water was taken into consideration. Survey data show that 51.5% service recipients of Dhaka WASA reported that the water supplied by WASA was dirty. The areas where more than half of the service recipients mentioned their experience of getting dirty water are mainly Begunbari, Kathalbagan, Kadamtoley, Nandipara, Shahidnagar, Shampur, South badda, Siddiqbajar, Bagbari, Islambag, Johurabad, Borobag, Jurain, Nawabpur etc. Again, 41.4% service recipients reported that the water they got through supply line contained bad smell. The areas where more than half of the service recipients reported bad smell in water are mainly South badda, Siddiqbajar, Karwanbajar, Nandipara, Johnson road, Nayapalton, Islambag, Komlapur, Jurain, Shahidnagar, Nawabpur, Nakhpara, Borobagh, Zafrabad, Rosulbag, Kafrul etc. Besides, 34.5% service recipients informed that they faced getting bad quality water all the year round. The service recipients also reported the season wise experience of getting supply of bad quality water, which is 62.1% in summer, 59.6% in rainy season and 7.5% in winter. 93.0% consumers reported that they made the supply water drinkable in various ways, of which 91.0% reported that they boil before using for drinking. It has been estimated that for the purpose of making the water drinkable by boiling has an implication of burning natural gas amounting 365,7,37,008 cubic metre, which costs approximately 332.37 crore BDT every year. Moreover, the users of WASA water encounter various waterborne diseases due to bad quality of water. According to survey, 24.6% consumers from residential and slum connections were affected by water borne diseases such as diarrhoea (63%), jaundice (34.3%), skin diseases (37.4%), dysentery (17.1%), typhoid (19.2%), cholera (13.1%) and other water borne diseases (3.7%).

4.4 Capacity and effectiveness in maintaining sewerage system

There are not sufficient sewerage lines of Dhaka WASA for the extraction of excessive sewage adding everyday due to the increased population of Dhaka city. Every day 1.4 million cubic metre of sewage is produced in Dhaka city. WASA has only one treatment plant, which has a capacity of treating 1,50,000 cubic metre per day. However, this plant treats only 50,000 cubic metre. The rest of the 13,50,000 cubic metre sewage are directly discharged in the adjacent rivers (Buriganga, Shitalakshya, Turag and Balu) through different canals. This means that Dhaka WASA is by and large responsible for polluting the rivers of Dhaka and its neighbouring areas due to the inadequacy and mismanagement of sewerage systems.

Survey data show that 20.5% service recipients faced various sewerage related problems. Among them, 75.6% service recipients reported that they experienced the situation of overflow in the sewerage line, 79.7% found that sewerage lines were not working and 14.4% informed that the sewerage line and water line were leaked and mixed up. Regarding the time of these problems in the sewerage line, 21.8% respondents informed that they faced the problem all the year round. In addition, 94.4% respondents informed that they experienced this situation the most in the rainy season while 9.6% in the summer and 2.2% in the winter.

4.5 Capacity and effectiveness in drainage system management

In 1989, drainage system management was added to Dhaka WASA's activities. Previously, this task was managed by the Department of Public Health Engineering. Now a total of 350 km drainage, 10 km box culvert, 74 km canals (26 canals) are managed by Dhaka WASA. This is to mention that although Dhaka WASA claimed in a report that among the 26 canals, 22 are functioning but the reality is some of the canals are filled up with wastage. There is also lack of initiatives in the construction and maintenance of drainage system for the purpose of draining out the excessive rainwater. Field data also show that the officials responsible for the drainage system management do not inspect canals and drains regularly though they are assigned to make visit to the systems at least twice in a month. As a result, the canals are filled up with wastage, grabbed and the grabbers construct illegal structures in the canals.

4.6 Irregularities and corruption

Irregularities and corruption in recruitment: There are allegations of irregularities and corruption in the appointment of some posts in Dhaka WASA. The irregularities include changing in the conditions for the narrow objective of appointing preferred persons. For example, for the Managing Director position the age limit of applicant is 59 years, but in 2015 the condition was relaxed and increased the limit to 60. In 2016, the condition of age limit for the position of Deputy Managing Director (DMD) was not mentioned in the advertisement. Again, another form of irregularities in fulfilling contractual positions was evident. In this case an undue intervention was made from the concerned ministry in the recruitment process. Moreover, in the appointment of Managing Director in 2013, the ministry appointed someone without the approval of Dhaka WASA Board. In addition to that, in some cases the decision of the Board was neglected by the Dhaka WASA management. For example, in 2017, the Board and concerned ministry recommend to appoint three Deputy Managing Directors but the WASA management did not execute the decision of appointment. Furthermore, a direction of the concerned ministry to formulate a policy to stop irregularities in the recruitment of contractual positions given in 2017 has not been implemented.

Irregularities in posting and transfer: There are allegations of discrimination in posting, transfer and promotion of general employees. Besides, some employees have been remaining in the same position considering the potential source of earning unauthorised money. This happens mostly in the permission and renewal of deep tube-wells section and the nexus between corrupt officials and management. Moreover, the officials those who have 'good relation' with management got the responsibility as project director.

Irregularities in training of officials: There is allegation of irregularities in the selection of employees for training. The irregularities include biasness towards the staff maintaining 'good relation', mismatch in aligning training needs and nature of responsibilities of staff. Moreover, there is also allegation of giving priority to political attachment of staff in selecting trainees for local and foreign training. In this context, an official of Dhaka WASA remarked, "Those who have strong connection (with higher authority) get the opportunity of foreign training".

Irregularities in procurement: Irregularities and corruption are prevalent in different stages of procurement in Dhaka WASA. There is an allegation of making a purchase plan without considering the utility of the goods. For example, Automated Metre Readings (AMR) were purchased by spending 400 million taka without considering the utility. Later, these metres became inactive due to their inability to work amid the reality of blending waste into water. In this regard, an official of WASA argued, "When the problem was understandable after the

first slot of purchasing, WASA could stop purchasing rest of the AMRs." Furthermore, at the preparatory stage of procurement, a group of officials having affiliation with the procurement leaked out the preferential prices to their preferred vendor. In many cases, tender process was not followed properly according to the procurement policy. Moreover, there is an allegation of corrupting the tender assessment process and selecting vendor. Furthermore, there is an allegation of involving vendors with whom some Dhaka WASA engineers and their family members have close relations.

Gaps in supervision and monitoring in the implementation process are evident. The lack of supervision, in many cases, impacts on timely implementation of work according to work order and quality of materials and work. Moreover, it is alleged that papers related to submission of bills, payment of bills are not verified properly by the concerned official. There is also allegation of making bill-vouchers of contractors by WASA officials, getting bribe money by the concerned WASA officials for clearing payment to the vendors. It is alleged that the withdrawal of money by submitting fake bill-vouchers through nexus between contractors and concerned WASA officials also takes place.

Irregularities and corruption in project implementation: There are allegations of irregularities and corruption in the implementation of various projects of Dhaka WASA. A project was not completed within the scheduled time due to negligence and slowdown of implementation process. The project duration was also increased twice. Therefore, due to increased duration, the cost of the project increased too to about 295 crores. Moreover, despite having the opportunity highest quality materials such as pipes were not used under that project, which was proved by an expert team. Moreover, there are allegations of irregularities in the appointment of project's consultant and project director. In this case, the rule of recruiting consultants through a competitive process was violated. In another project, works were divided into smaller slots in order to give works to the vendor/contractors directly, rather than following the open tendering process. In the same project, it was permitted to complete the work through eleven packages, but was completed in more than two hundred packages. Again, in order to implement the project, 80 contractual companies were paid extra money beyond the amount mentioned in the contract, which was considered unusual to the IMED. Moreover, the project was planned to set up 54 kilometer pipe drain, however, ended up after completing 48 kilometers.

Undue interference of CBA in administrative work: Due to their close partisan political attachment, the CBA leaders in Dhaka WASA practice a lot of undue interference in administrative activities. For example, there is a shortage of human resources in different departments and circles of Dhaka WASA, but there are allegations of opposing the recruitment of required staff by the CBA leaders.

Irregularities and corruption in taking metre reading: There are allegations of irregularities and corruption in metre reading and billing. The most significant allegations are billing without checking the metre, billing on an average based on estimation, and taking metre readings by the 'Dubly' ('assistant' illegally recruited by revenue inspectors and pump operators) instead of the revenue inspectors. According to the rules, revenue inspectors have provisions to make bills by checking the metre, but a section of revenue inspectors provide an average bill without checking the metre reading. According to service recipients, they do not find coherence in billing with the metre readings. This billing without metre reading does not help adjust the reading and thus the actual bills add with next month. When the revenue inspectors check the metre, they find huge dues and therefore charge with a big amount of bills. According to the service recipients, most of them are not capable to pay together this

huge amount. Metre readers then use the opportunity. In this case, if the customers want the help of the revenue inspector, they demand a fixed amount of bribe to reduce the amount of money in the bill. On the other hand, in some areas, there is allegation of billing through nexus between service recipients and revenue inspectors. In this connection, a service recipient informed, "Most of the service recipients settle a contract with revenue inspectors. The inspector gives water bill without reading our metres. Every month I pay a bill of 1500-2000 taka on an average. For this help, I have to bribe 1000 taka per month to the inspector."

Irregularities and corruption in customer service: Survey findings show that 26.9% service recipients contacted Dhaka WASA from July 2017 to June 2018, for water or sewerage related services and 61.9% of them were victims of irregularities, harassment and corruption. Among the victims, 36.1% were victims of bribery, 51.3% victims of negligence, 20.7% victims of delay, 23% victims of absurd billing and 3.8% victims of other types of corruption such as forced meter tempering.

Table 1: The amount of bribe money against type of services

| Type of services | Amount of bribe money (in Taka) |
|---|----------------------------------|
| Taking water connections | 200 to 3000 |
| Removal of barriers in pipeline | 300 to 4500 |
| Emergency water supply by vehicle | 200 to 1500 |
| Purchase/change of Metre | 1000-15000 |
| Metre reading and bill settlement | 50 to 3000 |
| Permission of deep tube-well installation | One lac to two lacs |

Those who bribed mentioned the causes of bribing. Among the victims of bribery 52.5% were forced to bribe, 53.5% paid to avoid harassment or trouble, 59.6% paid to get the service on time, 14.8% paid to get service before the scheduled time, 13.3% did not know the actual fees and rules. 86.2% victims gave the bribe money to WASA employees and 15.6% to the brokers.

Complaints receiving and redressing: Dhaka WASA has a grievance redress centre in each MODS and revenue zone and a hotline number in head office but there is a gap in grievance receiving and redressing mechanism. The survey findings reveal that 27.5% service recipients complained their problems to Dhaka WASA offices. Among them only 2.4% complained through WASA hotline (16162). Among those who place their complaints, 57.4% complained for water availability, 32.2% for water quality, 28.5% for bills, 18.9% for sewerage system and 1.1% for other issues. In response to complaints, 61.5% complainers informed that authority received the complaints but no solution was made, 20.2% reported that they received timely solution, 16.7% reported that solution took a long time and 6.9% reported that the authority did not receive their complain.

Flow of information about the services of Dhaka WASA: Dhaka WASA has taken some steps for the simplification of its services. Among them, online billing system and availing information on billing on the website, application for various services through online, installation of hotline for information seeking and lodging complaint, and installation of water ATM booth at some places are mentionable. However, survey findings show that a significant portion of the service recipients are not aware of these initiatives. For example, Dhaka WASA started the online payment of bills through its website in 2010, but a large part of the service recipients (98%) reported that they pay their bill through bank. In addition, about less than half of service recipients (41.8%) know about the option of submitting bill

and getting bill related information through website, 37.6% service recipients know about the option of submitting water and sewerage connection application through website, 28.0% recipients know about bottle water manufactured by Dhaka WASA, 8.1% know about water ATM booth service and only 18.4% know about the WASA hotline (16162).

Satisfaction of service recipients on Dhaka WASA services: The service recipients reported that they have dissatisfaction over the services provided by Dhaka WASA due to poor quality of services as well as corruption and irregularities of Dhaka WASA. The survey findings reveal that overall more than one third of service recipients are dissatisfied. However, the rate of satisfaction over quality of water and sewerage system is quite dissatisfactory. Survey data show that only 6.8% service recipients expressed their satisfaction over quality of water and 2.2% recipients expressed their satisfaction over the services related to the sewerage system.

Figure 1: The satisfaction rate over Dhaka WASA services

| Type of services | Level of satisfaction (Percentage) | | |
|-------------------------------|------------------------------------|----------|--------------|
| | Satisfied | Moderate | Dissatisfied |
| Water supply and availability | 24.2% | 46.2% | 29.6% |
| Water quality | 6.8% | 46.2% | 47.0% |
| Sewerage system | 2.2% | 19.3% | 78.5% |
| Grievance Redress System | 11.0% | 21.7% | 67.3% |
| Overall | 20.1% | 42.4% | 37.5% |

5. Conclusions

Although Dhaka WASA initiated to bring dynamism in customer service activities, water and sewerage services still have extensive limitations and challenges. There are gaps in transparency and accountability mechanisms alongside the challenges of irregularities and corruption. There is also gap in the effectiveness of Dhaka WASA Board in terms of its role to ensure internal accountability of Dhaka WASA. There are also limitations and challenges in Dhaka WASA related laws and regulations. There are also gaps in the effective implementation of the laws. Moreover, Dhaka WASA does not have sufficient capacity to ensure water demand of increasing population in a sustainable and environmentally friendly manner. Furthermore, there is a discrimination in service quality and lack of equity in water and sewerage services in different areas. The survey findings show that the people living in slums are discriminated in providing water services. On the other hand, due to low quality of water, service recipients are at risk of water borne diseases. This is also mention worthy that the people in the city are bound to waste natural gas and other fuels to purify the WASA water, which creates huge unnecessary burden and waste of natural resources. Furthermore, more than one third of service recipients are dissatisfied with the services of Dhaka WASA due to low quality of water and sewerage services.

6. Recommendations

Based on the findings of this study, Transparency International Bangladesh (TIB) proposes recommendations to develop Dhaka WASA as a more effective and service-oriented institution:

For the Local Government Division (LGD)

1. Set up a separate regulatory commission to determine the tariff of water and sewerage services. This commission is expected to determine the price of water and sewerage services on the basis of public opinion and to ensure progressive tariff system and equity.
2. Ensure the formation of WASA Board with the members free from political influence and undue biasness in order to ensure effective implementation of the Dhaka WASA Act.
3. Entrust the drainage management of Dhaka City to a single authority for resolving the waterlogging.

For the Dhaka WASA

4. Formulate and implement specific policy to facilitate a fair recruitment process of contractual positions. The policy must clarify necessary criteria such as educational qualification, professional experiences, age etc. of the candidates.
5. Update the organogram of Dhaka WASA and take stern action to fulfill the vacant posts on priority basis alongside setup automation system to reduce dependency on human resource .
6. Ensure supervision of field level activities, inspection of canals, monitoring of revenue collection, drainage management and accountability system.
7. Ensure proper repairing and maintenance of existing lines and construction of new sewerage lines for the purpose of draining out rain water and sewage.
8. Ensure uses of surface water along with rainwater in order to reduce pressure on groundwater and ensure sustainable and environmentally friendly water production system.
9. Expedite the construction projects on surface water treatment plants.
10. Maintain and repair the pipelines to ensure safe and quality water supply.
11. Take stern action to establish and implement of District Metered Area (DMA) for safe and uninterrupted water supply
12. Update service related information on the website and increase publicity about service related initiatives.
13. Ensure necessary logistics and vehicles for inspection both in head office and MODS zone offices.
14. Promote positive and negative incentives to control irregularities and corruption in Dhaka WASA. Besides, the dishonest employees must be identified and made accountable.
15. Introduce a standard assessment system in order to assess the quality of services and to enhance the quality.