

**GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH**  
**Ministry of Local Government, Rural Development and Co-operatives**

**Dhaka Water Supply and Sewerage Authority (Dhaka WASA)**  
**Dhaka Water Supply Network Improvement Project (DWSNIP)**  
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# **The SWOT Analysis of Dhaka WASA**

**Capacity Building for Sustainability (CBS) Consultants**  
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# **THE SWOT ANALYSIS OF DHAKA WASA**

## **A State Owned Water Supply Authority**

**February, 2021**

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## ACRONYMS

ADB	Asian Development Bank
AMR	Automatic Meter Reading
ATM	Automated Teller Machine
BoD	Board of Directors
CBS	Capacity Building for Sustainability
CEO	Chief Executive Officer
DCC	Dhaka City Corporation
DMA	District Metered Area
DMD	Deputy Managing Director
DNCC	Dhaka North City Corporation
DSCC	Dhaka South City Corporation
DWASA	Dhaka Water Supply And Sewerage Authority
DWSSDP	Dhaka Water Supply Sector Development Project
GIS	Geographic Information System
GoB	Government of Bangladesh
HQ	Headquarter
LIC	Low Income Community
MD	Managing Director
MIS	Management Information System
MLGRDC	Ministry of Local Government, Rural Development and Co-operatives
MODS	Maintenance Operations Development Services
MoF	Ministry of Finance
SCADA	Supervisory Control and Data Acquisition
SWOT	Strength, Weakness, Opportunities, Threats
WTP	Water Treatment Plant

## 1. SUMMARY

SWOT analysis is a technique used to determine and define the Strengths, Weaknesses, Opportunities and Threats of an organization. It is very simple to understand and a popular approach to assessing the status of an organization, company or enterprise.

SWOT analyses can be applied to an entire company or organization, or also to individual departments and projects within an entity. Most commonly, SWOT analyses are used at the organizational level to determine how well a business is aligned with its growth routes and performance benchmarks. SWOT analyses can also be used to ascertain how well a particular project is performing in comparison to initial performance projections.

Having performed this SWOT analysis we assess that Dhaka WASA currently has sufficient strength, but also, as with most organizations, some weaknesses. Currently the biggest threat for Dhaka WASA is the continuing heavy reliance on tubewells (DTW) within Dhaka City, that are abstracting water from a rapidly depleting groundwater source. However, Dhaka WASA is making strong efforts to address this situation, to increase the proportion of water supply obtained from surface water sources to 70% and reduce reliance on groundwater. In 2015, a long term water supply master plan was prepared. In 2019 the Padma-Jashaldia Water Treatment Plant was commissioned and also the Tetuljhora-Bhakurta Wellfield which is in Savar and outside Dhaka City, was commissioned. A major water treatment plant, Gandharbpur WTP, is under construction and will treat surface water from the Meghna River. Preparatory work has started on Saidabad Phase III Water Treatment Plant. This will also replace the Shitalokha River as the source of raw water for Saidabad Phases I&II with water from the Meghna River.

## 2. INTRODUCTION

Dhaka WASA is a state-owned water supply and sewerage service organization. In Bangladesh, Dhaka WASA is the largest water supply entity. The original water supply organization was established in the year 1963, by an ordinance passed by the then Government. Subsequently, in 1956, an Act was passed by the Government giving some autonomy and statutory status to the organization.

The organization became Dhaka WASA under the WASA Act of 1996.

A 13-member Board of Directors is nominated by the Government, from various professional bodies and government departments, such as from the Ministry of Finance (MoF) and the Ministry of Local Government, Rural Development and Co-operatives (MoLGRDC). The Managing Director of Dhaka WASA is a member of the Board of Directors and Chief Executive.

The total number of employees on the Dhaka WASA payroll is 3,126, of which Grade One executives are 263, Grade Two employees are 268, Grade Three employees are 1,244 and Grade Four employees are 1,351. Dhaka WASA also engages some of its workforce through outsourcing and hiring employees on Contract-basis. The field operation and maintenance activities of Dhaka WASA are organized into 10 (ten) MODS Zones and 10 (ten) Revenue Zones, each MODS Zone is headed by an Executive Engineer and each Revenue Zone is headed by a Deputy Chief Revenue Officer. Direction and administration is provided from Dhaka WASA Bhaban.

Dhaka WASA's role has been modified several times over the years. Particularly on 31<sup>st</sup> October 2020 all of Dhaka WASA's responsibilities in Narayanganj were transferred from Dhaka WASA to Narayanganj City Corporation and, effective 1<sup>st</sup> January 2021 Dhaka WASA's responsibilities for surface water drainage in Dhaka City were transferred to the Dhaka City Corporations, North and South.



### 3. METHODOLOGY AND APPROACH

In preparing this SWOT analysis of Dhaka WASA's activities the CBS consultants met with members of the Dhaka WASA Management (Director Development, Director Technical, Director Finance, Commercial Manager and Chief Engineer) to discuss their perception of the Strengths, Weakness, Opportunities and Threats for the Authority. The interviewees expressed their individual and thoughtful opinions based on their understanding and experience from working within Dhaka WASA and managing various portions of the organization's activities. Their assistance is greatly appreciated.

The CBS team includes two former members of the Dhaka WASA management team who served as Project Directors and Chief Engineers (Engr. A.F.M Abdul Aziz and Engr. Mohammad Shahjahan). Their combined many decades of experience in the Authority, over a period when it achieved extraordinary progress, also enabled them to give wise-council about Dhaka WASA's strengths and weaknesses. Furthermore, several other of the CBS team have long experience working with Dhaka WASA on consultancy teams in engineering and finance. The CBS team held several day-long internal meetings to assemble pertinent opinions relevant to the SWOT analysis.

Further documents and materials noted in references have been consulted. This report represents the best judgement of the CBS team on the strengths and weaknesses of Dhaka WASA and the external opportunities and threats the Authority currently faces.

#### **4. OBJECTIVES AND BENEFITS**

A SWOT analysis provides a self-assessed picture of how an entity is executing its mission. It assesses the entity's:

- (S) Strengths
- (W) Weaknesses
- (O) Opportunities
- (T) Threats

SWOT is the acronym used to indicate the above areas of the entity's situation and the SWOT analysis gives a comprehensive view of the most important factors affecting the future of the management of the organisation. Dhaka WASA is the biggest water supply entity in Bangladesh and the Authority is regulated by the Government, as per the pertinent and effective laws of Bangladesh. The SWOT analysis forms a quick impression of the Authority's activities and operations that the Dhaka WASA management should consider in preparing future recommendations for action plans, control measures to achieve expansion of coverage of services, quality of service and activity diversification. It should be clearly understood that the SWOT analysis itself is not an action plan. When a SWOT analysis identifies a strength, weakness, opportunity or threat, further detailed in-depth study is required to decide how to address the issue with an action plan.

The SWOT analysis identifies the main issues that should influence management decisions (some are internal and others are external). These management decisions may recommend formal action plans to maximize the potential of sector plans, through increasing strengths and by utilizing opportunities, while minimizing the effects of weaknesses and mitigating threats. Strengths are services, resources and good things that assist organizations in achieving their goals. Weaknesses are disadvantage factors that affect overall sector performance. Opportunities include available external advantage factors that may be used to reach goals, while the threats comprise external factors potentially harmful to the entity's performance.

The SWOT analysis has an important role in any strategic planning process. It may be applied in different fields and contexts with good results, because of its high level of simplicity, transparency and flexibility. Due to the SWOT analysis' simplicity it cannot be accepted as the final criteria for any critical decision. Further study and investigation is required, particularly where decisions relate to financial and policy matters.



## 5. SWOT MATRIX

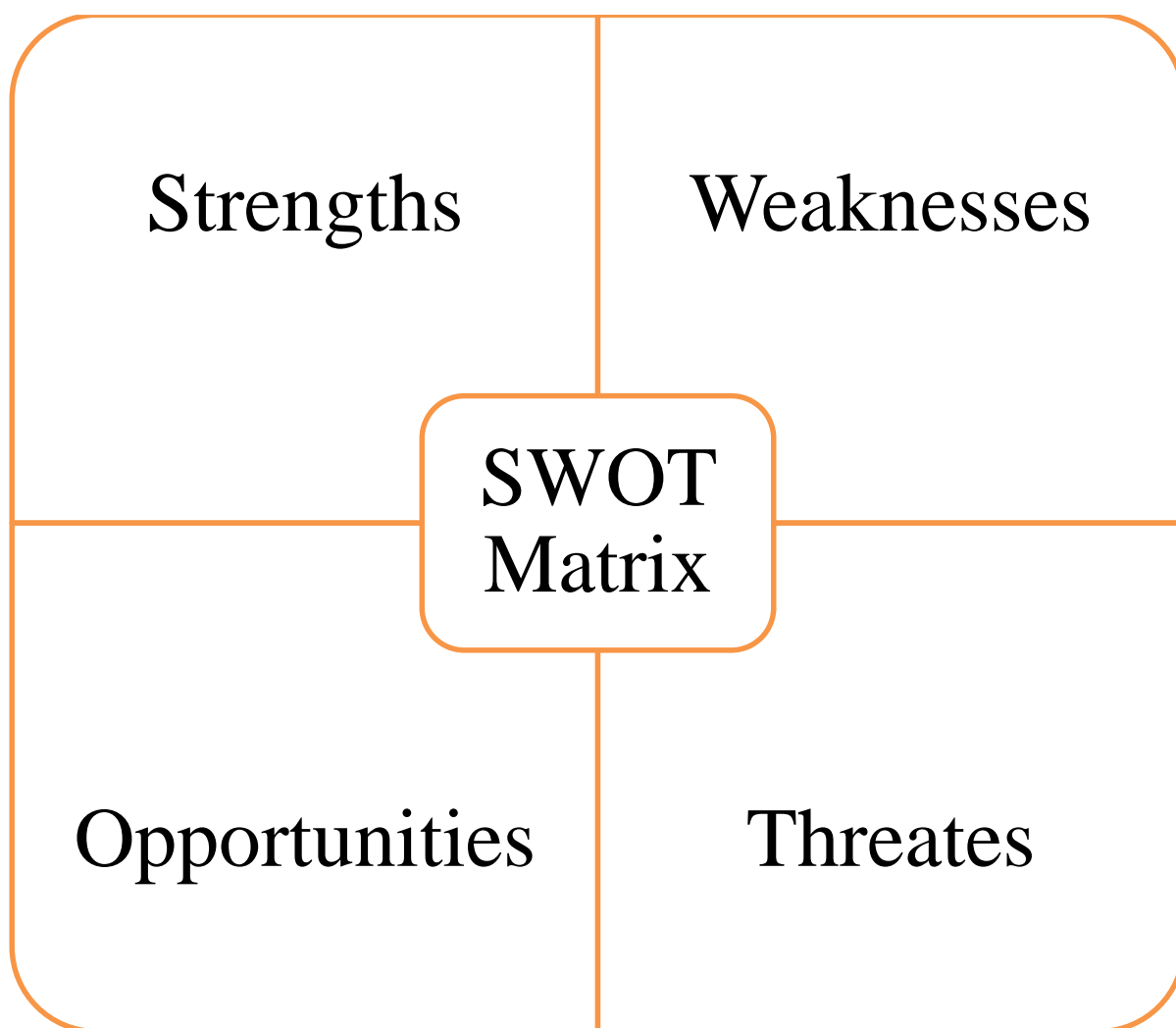
### 5.1. What is a SWOT Matrix

The SWOT Analysis framework helps an organization to identify the **internal strategic factors**, such as its strengths and weaknesses, and **external strategic factors** such as opportunities and threats. It leads to a 2x2 matrix – also called the **SWOT Matrix**.

The **Strengths-Weaknesses-Opportunities-Threats (SWOT) Analysis / Matrix** will enable the management of Dhaka WASA to develop four types of strategies:

- ❖ SO (strengths-opportunities) Strategies
- ❖ WO (weaknesses-opportunities) Strategies
- ❖ ST (strengths-threats) Strategies
- ❖ WT (weaknesses-threats) Strategies

The matrix is illustrated in the figure below:



The primary purpose of the SWOT matrix is to identify the strategies that Dhaka WASA may develop to exploit external opportunities, counter threats, build on strengths, and eradicate

weaknesses. The results are very simple to understand and to use to assess an organization's strategic position in relation to its mission.

## **5.2. SWOT Matrix Strategic Objectives**

SWOT analysis is a vital strategic planning tool that can be used by managers to present a situational analysis of the organization. It is a simple technique to map out the present Strengths (S), Weaknesses (W), Opportunities (O) & Threats (T) Dhaka WASA is facing in its current business environment.

Dhaka WASA is the largest water supply utility in Bangladesh. It has a more-or-less monopoly market for providing water supply and sewerage services in Dhaka and an assured revenue. SWOT analysis is a highly interactive process. Its preparation requires effective coordination among various departments within the organization, such as finance, operations, management information systems, human resources and strategic planning.

Preparing a SWOT analysis of Dhaka WASA is a requirement of the Terms of Reference for the CBS consultancy. All of the CBS experts contributed to this SWOT analysis, by providing opinions/ suggestions related to their area of expertise. That exercise produced the following TEMPLATE. Interviews with Dhaka WASA managers elicited some valued observations that are also incorporated in the TEMPLATE. Notes from the interviews are summarized in Annexure 1 to this report.

## 6. TEMPLATE OF THE SWOT ANALYSIS OF DHAKA WASA

The following tabulation lists the assessment of Strengths, Weaknesses, Opportunities and Threats identified by the CBS Team Experts and for interviews conducted with Dhaka WASA senior managers. The most important items have been selected as “Key Issues” to be carried forward to the Dhaka WASA SWOT Matrix, either as individual items or consolidated into a single item of similar character.

Ref	Performance Measure	Remarks
S	STRENGTHS( Internal )	
1.	The Dhaka WASA Senior Management Team (MD, DMDs & Directors) are well experienced, dynamic and provide wise and strong direction and leadership.	Key issue
2.	Established since 1963 Dhaka WASA is a well-reputed and experienced organization with a long history of successfully providing water supply and sewerage service, which was greatly enhanced by the Dhaka WASA Turnaround Program under the current management.	Key Issue
3.	Dhaka WASA has a well-educated and experienced team of staff and employees, supported by a Training Centre that has provided in-house training since 1980, and which also arranges overseas training for Dhaka WASA personnel	Key Issue
4.	Dhaka WASA has a high degree of transparency, publishing the organization’s annual reports and other key documents and announcements on the Dhaka WASA website for access by the public and all stakeholders.	Key Issue
5.	Among around 17 No. departments and organizations under the wing of the Ministry of Local Government, Dhaka WASA ranks 2 <sup>nd</sup> in meeting its annual performance agreements with the government.	
6.	Under the current management structure, Dhaka WASA has undertaken many initiatives to improve its service to the customers, including: <ul style="list-style-type: none"> <li>• Computerization throughout Dhaka WASA departments.</li> <li>• Establishing a Dhaka WASA website.</li> <li>• Establishing a Management Information System.</li> <li>• Providing for bill payment online and over-the counter at-banks.</li> <li>• Enabling customer grievance redress system.</li> <li>• Establishing a Water Quality Committees.</li> <li>• Establishing a “Community Programme &amp; Consumer Relation Division” to address the needs of Low Income Communities (LIC).</li> </ul>	

Ref	Performance Measure	Remarks
S	STRENGTHS (Contd.)	
	<ul style="list-style-type: none"> <li>Establishing Anti-Corruption Campaign and Committees.</li> <li>Establishing a Committee to implement use of social media for communication with the public.</li> </ul> <p>If one considers best international practices in managing and operating water utilities, Dhaka WASA has taken steps to implement just about all of them.</p>	
7.	Dhaka WASA stays abreast of developing technology for water and sewerage utilities and is implementing many beneficial new technologies.	Key Issue
8.	Dhaka WASA has earned strong support from the Government of Bangladesh.	Key Issue
9.	Dhaka WASA reliably meets its debt service obligations.	
10.	Dhaka WASA has gained the confidence of international funding agencies in efficiently disbursing loan money for development of essential water supply and sewerage infrastructure, and capacity building for efficient O&M of new infrastructure.	Key Issue
11.	Dhaka WASA's achievements have gained the organization a high reputation in the community of international water utilities and acknowledgement as the best performing water utility in South Asia. Many international organizations have honoured Dhaka WASA with awards to recognize the Authority's meritorious service to Dhaka's residents.	
12.	Dhaka WASA has strong international partnering, particularly through the Water Operators Partnership (WOP), which is a partnership between Dhaka WASA and Vitens Evides International. VEI experts have been assisting Dhaka WASA for several years based in a dedicated WOP office in the Dhaka WASA Bhaban.	
13.	Dhaka WASA is using performance indicators and benchmarking to set performance targets and monitor progress towards their achievement.	
14.	Dhaka WASA customers can register complaints, and seek grievance redress, in person at a dedicated office in their local MODS Zone office or through the telephone WASA link 16162 at Dhaka WASA Bhaban.	

Ref	Performance Measure	Remarks
S	STRENGTHS (Contd.)	
15.	In recent years Dhaka WASA has introduced computerized systems for accounting, billing, GIS, MIS, SCADA and engineering.	Key Issue
16.	Dhaka WASA provides 100% water supply coverage, including to LICs, and has implemented the installation of water ATMs and the Shanti water bottling plant. This has been achieved in the face of a rapid increase in both the population served and water demand.	
17.	Through the establishment of DMAs, with network pipelines and service connections completely replaced with HDPE pipes, physical water loss in the rehabilitated distribution networks has been reduced to single figures. This has also created a resilient water distribution network using pipe materials that do not corrode.	Key Issue
18.	Dhaka WASA is introducing Automated Meter Reading to ensure that all water used by customers is accurately measured and recorded.	Key Issue
19.	Dhaka WASA has prepared long-term master plans to guide the Authority in implementing water and sewerage infrastructure expansion and improvements over the coming years and decades.	Key Issue
20.	Dhaka WASA has in place a major programme to construct large surface water treatment plants that will take raw water from the Padma and Meghna rivers in order to meet most of Dhaka's water needs from surface water sources and reduce dependence on rapidly depleting local groundwater and local surface water sources that are vulnerable to pollution.	Key Issue
21.	Dhaka WASA is practicing chlorine gas disinfection at tubewells (DTW's) to ensure the supply of safe water to customers.	Key Issue
22.	In 1978, Dhaka WASA constructed a Central Water Quality Laboratory at Asad Gate. The laboratory was upgraded by DWSSDP and is now fully equipped to conduct all testing required for water supply and wastewater and to monitor the supplied water for safety.	
23.	As a service for the wellbeing of its employees, Dhaka WASA operates a health clinic in the Dhaka WASA Bhaban.	

Ref	Performance Measure	Remarks
W	Weaknesses( Internal )	
1.	Low tariffs make it difficult to achieve strong performance in terms of the Operating Ratio.	
2.	There have been past audit problems in reconciling financial figures produced by different Dhaka WASA departments. This has led external auditors to produce qualified annual audits.	
3.	There is currently an adequate quantity of water supplied, however, complaints are sometimes received from customers about the quality of water supplied to them.	Key Issue
4.	The terms and conditions of employment for permanent Dhaka WASA employees are good and the turnover of employees is very low. On the other hand, the turnover of staff engaged on a limited duration contract-basis is relatively high, due to lack of employment security, of promotion opportunity and of increments in remuneration. Staff of DMA management teams are engaged on contract-basis. They are to learn new skills through the CBS consultancy training and this skill-base will be lost if their services are not retained.	Key Issue
5.	Due to a number of factors, the reliability of water meter reading, which is a major factor in revenue generation, is questioned.	Key Issue
6.	Dhaka WASA is obliged to supply safe, clear and palatable water to its customers, However, water quality monitoring is currently quite weak, particularly: (1) in terms of monitoring water quality in the networks and the number of samples taken in comparison to international standards; and (2) the number of water quality parameters that are monitored at water treatment plants.	Key Issue
7.	Water quality monitoring facilities at Chandnighat WTP, Padma-Jashaldia WTP and the Tetuljhora-Bhakurta WTP are inadequate.	Key Issue
8.	The management and dissemination of water quality data is inadequate.	
9.	At around 20% to 25%, sewerage service coverage, development of the sewer network and sewage treatment facilities lags far behind water supply coverage.	Key Issue
10.	Some customers in un-sewered areas discharge inadequately treated wastewater to the stormwater drains, leading to pollution of Dhaka's lakes, canals, rivers and, potentially, groundwater.	



Ref	Performance Measure	Remarks
W	Weaknesses (Contd.)	
11.	Dhaka WASA public relations activities are currently not strong. There is no use of television presentations, newspaper flyers, etc. to address (1) public tolerance to temporary nuisance caused by construction works, (2) avoiding water wastage, (3) avoiding water theft, and (4) the consumers' role in ensuring water quality and health by cleaning and disinfecting their underground water storage tanks and roof tanks.	Key Issue

O	Opportunities(External )	Remarks
1.	<p>Dhaka WASA is a world-class water utility with well-trained employees and excellent facilities. Internationally, many utilities expand into providing services and training for other organizations and countries, because these activities are outside the jurisdiction of the domestic regulatory authorities.</p> <p>Dhaka WASA already has agreements to provide assistance and training to other water utilities in Bangladesh and internationally. Current international agreements include one with Nepal's Kathmandu Upatyaka Khanepani Limited (KUKL).</p> <p>Using the skill-base of its employees, Dhaka WASA could consider providing services to international and Bangladeshi organizations on a commercial basis to generate additional revenue.</p>	Key Issue
2.	<p>Dhaka WASA could provide services to other organizations using the Authority's state-of the-art facilities on a commercial basis, including:</p> <ol style="list-style-type: none"> <li>1. The Training Center, the Asad Gate Central Water Quality Laboratory and the Conference Centre facilities in Dhaka WASA Bhaban.</li> <li>2. The planned international research and training institute in Mirpur that will be developed with the assistance of ADB and K-Water</li> </ol>	Key Issue
3.	The Dhaka WASA service area does not presently cover all of the Dhaka urban area. Expanding the Dhaka WASA service area will lead to more revenue.	Key Issue
4.	Sewerage coverage is only between 20% and 25%. There is opportunity to increase revenue from sewerage billing by at least 75%.	Key Issue
5.	Continued implementation of technological advances will present opportunities for increasing efficiency, reducing costs and	Key Issue

	improving the Operating Ratio.	
Ref	Performance Measure	Remarks
O	Opportunities (Contd.)	
6.	Devolution of more responsibility to the ten MODS Zones, as mini-WASAs, for closer ties to the local community.	Key Issue
7.	Narayanganj City Corporation is now responsible for water supply to Narayanganj. Their two water treatment plants take water from the Shitalokha River, which has deteriorating water quality. When Narayanganj was within the Dhaka WASA service area, it was planned that Padma-Jashaldia WTP Phase II would supply water to Narayanganj. In continuation of that plan, Dhaka WASA could offer to supply water to Narayanganj City Corporation on a bulk water supply basis. Supply would be metered at a point of injection and Dhaka WASA would not have responsibility for downstream physical and commercial losses.	Key Issue

T	Threats (External)	Remarks
1.	<p>Water Demand in Dhaka WASA's service area is increasing steadily while groundwater, currently the major source of water supply, is being depleted. In 2019 Dhaka WASA commissioned the Padma-Jashaldia WTP and the Tetuljhora-Bhakurta wellfield WTP. Gandharbpur and Saidabad Phase III WTPs are being implemented.</p> <p>Any delay in achieving the planned 70% of water supply from the surface water sources will lead to further depletion of the groundwater and may possibly lead to deterioration in groundwater quality, water shortages and loss of revenue.</p> <p>There is a history of implementation of Dhaka WASA projects being delayed by external factors.</p> <p>The 2013 to 2018 Investment Plan in the updated Dhaka WASA 5-Year Corporate Business Plan, prepared by FCBC suggested the following schedule:</p> <p>Padma-Jashaldia WTP, Tuteljhora-Bhakurta Wellfield &amp; WTP, and Saidabad Phase III WTP were all budgeted for expenditure in the Financial Years 2012/13 through 2015/16. The actual implementation was:</p> <ol style="list-style-type: none"> <li>Both the Padma-Jashaldia WTP and the Tetuljhora WTP were commissioned in FY 2019/20 (4 years' delay?).</li> <li>Consultants for Saidabad Phase III WTP were only engaged in 2020.</li> </ol>	Key Issue

	Furthermore, the ongoing DWSNIP and DESWSP (which includes Gandharbpur Water Supply Project), are expected to be delayed by 2 years or more, in comparison to the planned schedule presented in the respective consultancy inception reports.	
<b>Ref</b>	<b>Performance Measure</b>	<b>Remarks</b>
<b>T</b>	<b>Threats (External) (Contd.)</b>	
2.	Chandnighat WTP takes raw water from Buriganga River and Saidabad WTP Phases I & II take water from Shitalokha River. Both of these water sources have become highly polluted. The water quality of Dhaka WASA's WTPs will be threatened, and treatment costs will increase, if pollution of the source rivers by discharges of wastewaters, solid wastes, etc. continues to worsen.	Key Issue
3.	One cause of pollution of Dhaka's lakes, canals and rivers is due to non-sewered properties discharging domestic wastewater to stormwater sewers. This impacts on the public perception of Dhaka WASA's performance.	
4.	Climate Change could lead to increased incidences of droughts and floods, impacting on surface water availability, water quality and damage to Dhaka WASA facilities.	Key Issue

## 7. DHAKA WASA SWOT MATRIX

From the Strengths, Weaknesses, Opportunities and Threats identified by the CBS Experts and Dhaka WASA managers and listed in the Templates presented in Chapter 6, Key Issues have been selected for the following Dhaka WASA SWOT Matrix.

### DHAKA WATER SUPPLY AND SEWERAGE AUTHORITY

#### SWOT MATRIX

<b><u>STRENGTHS ( Internal )</u></b>	<b><u>WEAKNESSES ( Internal )</u></b>
<ul style="list-style-type: none"> <li>Stable, experienced &amp; dynamic Senior Management Team.</li> <li>Capable &amp; experienced employees supported by a Training Centre established in 1980.</li> <li>50+ years successful record in providing water &amp; wastewater services for Dhaka.</li> <li>Major progress made under the 2009 “Turnaround Program” is continuing.</li> <li>Trust &amp; support of GoB &amp; Intl. Development Partners.</li> <li>Customer-oriented Corporate culture.</li> <li>Implementing technology for efficiency &amp; cost saving (computerization, MIS, GIS, SCADA, AMR, etc.)</li> <li>Long-term master plans for development of water &amp; sewerage are in place &amp; current.</li> <li>Major projects to substitute groundwater by surface water, rehabilitate water networks, reduce NRW &amp; expand sewerage service are under construction and/or in advanced planning stage.</li> <li>A monopoly position in piped water supply &amp; wastewater service for Dhaka City with assured revenue.</li> <li>Very Satisfactory Operating Ratio</li> <li>Water production capacity is more than water demand.</li> </ul>	<ul style="list-style-type: none"> <li>Customer complaints about the quality of supplied water are too frequent.</li> <li>There are many weaknesses in current water quality monitoring, including:               <ol style="list-style-type: none"> <li>Frequency of water quality monitoring in the networks vis-à-vis international norms;</li> <li>Equipment, protocols &amp; WQM equipment at water treatment plants;</li> <li>Control of Drinking Water Treatment Chemicals;</li> </ol> </li> <li>Monitoring of quality of surface water sources.</li> <li>Terms of employment for contract-based employees is leading to high employee turnover and loss of skills (e.g. DMA Management Staff).</li> <li>Sewerage coverage, 20% of Dhaka WASA Service Area, lags far behind water supply coverage.</li> <li>Although Dhaka WASA is striving to provide Quality service to the public, little is being done to publicize this.</li> <li>Water tariff is lower than the production cost.</li> </ul>
<b><u>OPPORTUNITIES ( External )</u></b>	<b><u>THREATS ( External )</u></b>
<ul style="list-style-type: none"> <li>Exploring potential for increasing efficiency and cost saving through outsourcing &amp; PPP.</li> <li>Expanding Dhaka WASA's service area into surrounding urban, or urbanizing, areas to bring in new customers &amp; revenue.</li> <li>Increasing sewerage coverage from the present 20% has potential for a very large increase in revenue.</li> <li>Devolution of some HQ responsibilities to MODS Zone Offices (Mini-WASAs) for closer ties to local communities.</li> <li>Taking advantage of Dhaka WASA's internal expertise and facilities to supply services to other parties on a commercial basis.</li> </ul>	<ul style="list-style-type: none"> <li>Population migration to Dhaka City, rapid economic development &amp; increasing water demands outstrip ability to increase &amp; distribute water supply.</li> <li>Project implementation delays, due to external factors (road cutting, land acquisition, public &amp; legal protests, etc.), lead to delays, increased costs and protracted Government approval process for budget increases.</li> <li>Delay to surface water supply projects and network rehabilitation projects, extends reliance on a diminishing groundwater resource &amp; may result in deteriorating groundwater quality &amp; water shortages and declining ground water table.</li> <li>Increasing surface water pollution of Dhaka City's surrounding rivers ( Buriganga, Shitalakshya etc). &amp; consequent increase in the cost of water supply.</li> <li>Climate change &amp; increased possibility for droughts and flooding.</li> <li>Lack of inter-agency coordination between the organizations disrupts project success.</li> </ul>

## 8. LIMITATIONS OF SWOT ANALYSIS

Although SWOT analysis is widely used as a strategic planning tool, the analysis does have some limitations.

- ❖ Certain capabilities, or conditions, in an organization can be both a strength and a weakness. This is one of the major limitations of SWOT analysis . For example, changing environmental regulations can be a threat to a company, but it can also be an opportunity, in enabling the company to operate on a level playing field with competitors, or even at an advantage over competitors if the company is able to meet the new challenge faster than its competitors.
- ❖ SWOT analysis does not show how to achieve a competitive advantage; so it must not be seen as an end in itself.
- ❖ The matrix is only a starting point for a discussion on how proposed strategies could be implemented. It provides an evaluation window but not an implementation plan.
- ❖ SWOT is a static assessment – at one point in time. As circumstances, capabilities, threats, and strategies change, the dynamics of a competitive environment will also change.
- ❖ SWOT analysis may lead an organization to overemphasize an internal or external factor in formulating strategies. There are interrelationships among the key internal and external factors that are not revealed by SWOT analysis, but may be important in devising strategies.

## **9. CONCLUSIONS AND RECOMMENDATIONS**

### **9.1. Conclusion**

Proper and unbiased understanding of the Strengths (S), Weaknesses (W), Opportunities (O) and Threats (T) of the organization is the first step for improvement using strong and innovative sets of measures to build on strengths, seize opportunities, overcome or mitigate weaknesses and avoid threats. This SWOT analysis has identified Dhaka WASA's strengths, weaknesses, opportunities and threats. This will support Dhaka WASA in making plans and judgments for future organizational development.

Whatsoever options or actions Dhaka WASA chooses, the four elements of this SWOT analysis will help Dhaka WASA to strategize wisely by:

- Building on strengths;
- Minimizing weaknesses;
- Seizing opportunities; and
- Responding to threats.

### **9.2. Recommendations**

The SWOT Analysis provides a starting point and reveals areas for action.

The SWOT Analysis confirms that Dhaka WASA's situation is predominately strong. There are few weaknesses and external threats, and those that do exist are being addressed by Dhaka WASA.

With a strong organization and staff, Dhaka WASA has opportunity to expand activities and revenue by entering into consulting and service provision for other organizations in Bangladesh and internationally. This is done by many European water utilities. It is a potential source of revenue and expands the experience and knowledge of a utility's employees. However, whether or not Dhaka WASA may take such an initiative could depend on the rules and regulations that govern the authority's activities.

In this case Dhaka WASA needs to take immediate steps to the following areas:

- a. To minimize the abstraction of underground water for the interest of the environment and its surrounding area as a whole.
- b. Major projects to substitute ground water by surface water, rehabilitate water networks.
- c. Strengthening water quality monitoring.
- d. Increase the sewerage coverage to stop water pollution and improving healthy environment.
- e. Minimize Non-Revenue Water (NRW).



# APPENDICES

## Appendix 1: SWOT Interviews with Dhaka WASA Managers

	<b>DIRECTOR DEVELOPMENT</b>
	<b>STRENGTHS</b>
1.	Sufficient Supply of Water
2.	Positive Financial Operating Ratio
	<b>WEAKNESSES</b>
1.	Currently Overall High Level of Non- Revenue Water
	<b>OPPORTUNITIES</b>
	Not Applicable
	<b>THREATS</b>
1.	High Population Density and Crowded Urban Area
2.	Large Population in Low Income Communities without Land Ownership/ Lease
	<b>DIRECTOR TECHNICAL</b>
	<b>STRENGTHS</b>
1.	Overall Dhaka WASA has enough manpower and equipment to support Dhaka WASA in meeting their obligations for water supply to Dhaka.
2.	Each MODS Zone office also has the necessary manpower, equipment and technical resources to meet water supply obligations in their respective areas of the City.
	<b>WEAKNESSES</b>
1.	While under execution, some projects need additional budget, and obtaining Government approval to additional budget may take considerable time.
	<b>OPPORTUNITIES</b>
1.	Not Applicable
	<b>THREATS</b>
1.	Growth in population and water demand outstripping ability to supply sufficient water.
2.3.	Shortage of available land where it is required for the development of Dhaka WASA facilities.
	Water quality issues.
	<b>CHIEF ENGINEER</b>
	<b>STRENGTHS</b>

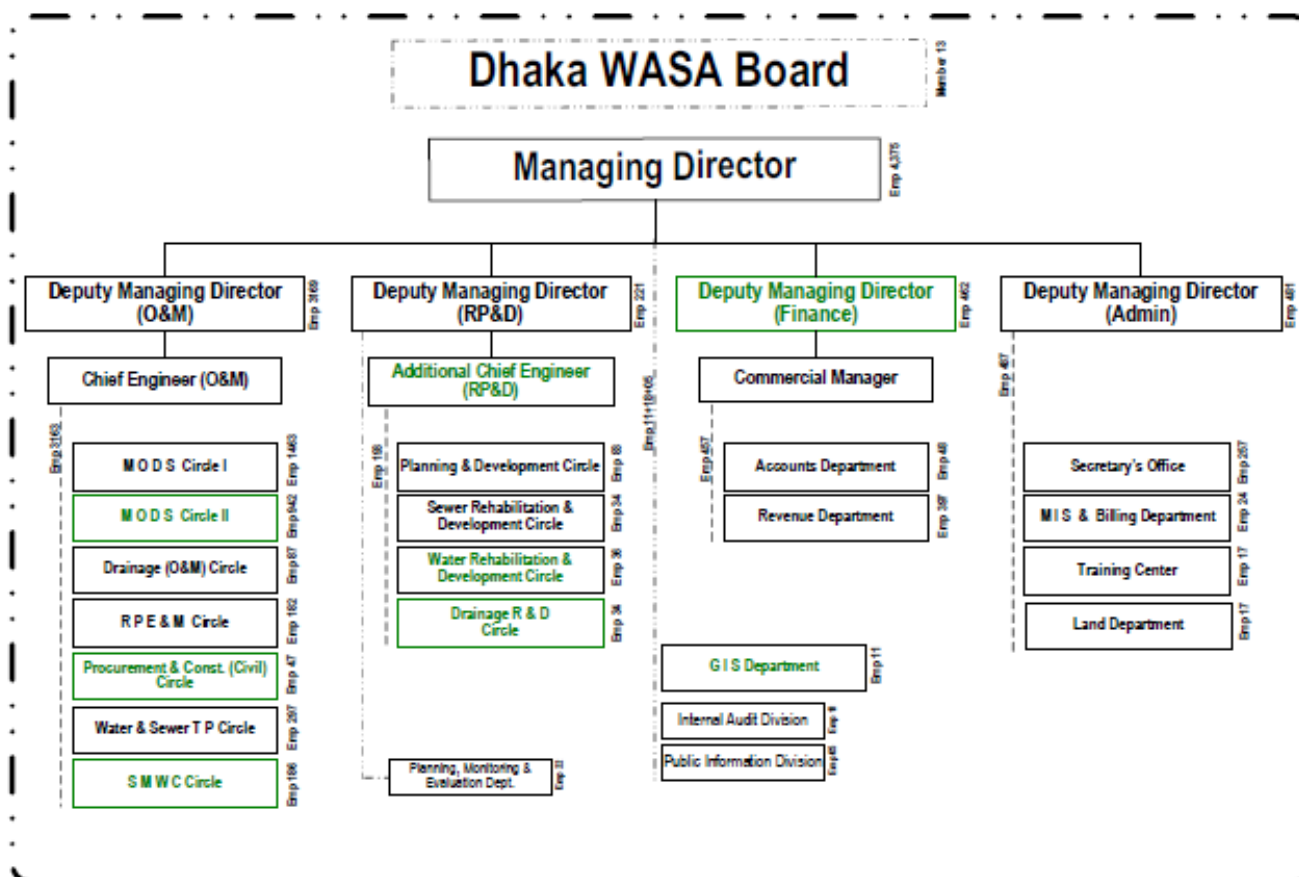
1.	Collected Revenue covers O&M costs.
2.	Officers and employees have good technical knowhow.
3.	Continuous training is provided by the Training Centre to maintain and increase capabilities.
	<b>WEAKNESSES</b>
1.	Rapid development of Surface Water Treatment Plants is needed to reduce reliance on groundwater resources for 70% of total water supply to 30%.
	<b>OPPORTUNITIES</b>
1.	Large rivers are available for use as sources for Surface Water Treatment Plants.
2.	Continuing introduction of technology, particularly SCADA, will provide improvements in operational efficiencies and reduction in operating costs.
	<b>THREATS</b>
1.	Increasing pollution in rivers, including micro-plastics, increasing water supply costs and
2.	Potential effects of climate change on water availability, river water quality and droughts.
3.	Continuing migration to Dhaka from other area and urbanization.
4.	Continued dependence on a groundwater resource that is steadily diminishing.
	<b>DIRECTOR FINANCE</b>
	<b>STRENGTHS</b>
1.	Dhaka WASA is a monopoly. There are no competitors.
2.	The Dhaka WASA top management provides capable and strong leadership.
3.	The Bangladesh Government strongly supports Dhaka WASA
3.	The International Lending Agencies strongly support Dhaka WASA.
4.	Dhaka WASA's income is secure.
5.	Dhaka WASA is cash-rich.
6.	Dhaka WASA has autonomy to increase the water tariff by up to 5% every year, and more with Government approval.
7.	The customer base is increasing year-by-year
8.	Dhaka WASA has highly qualified personnel. Many key management and technical officers were educated at the Bangladesh University of Engineering & Technology (BUET).
9.	Dhaka WASA is technologically aware and is reaping benefits from implementing technology advances (e.g. computerization, SCADA, AMR, etc.) and thereby

	reducing manpower.
	<b>WEAKNESSES</b>
1.	Whether all employees are diligently working according to the requirements of their roles and duties.
	<b>OPPORTUNITIES</b>
1.	Sewerage coverage is only around 20%, but expansion is underway. This expansion is an opportunity to automatically increase revenue.
2.	Inclusion of the new "unions" in the East of Dhaka City is expanding the customer base of Dhaka WASA.
	<b>THREATS</b>
1.	At times a group of Dhaka WASA employees will have a vested interest to not cooperate with a certain management initiative.
2.	Journalists and Transparency International Bangladesh make false and baseless reports of Dhaka WASA inefficiencies, etc. This adversely influences public opinion of Dhaka WASA's organization and services.
	<b>COMMERCIAL MANAGER</b>
	<b>STRENGTHS</b>
1.	The 1996 WASA Act gave considerable autonomy to the WASA Board and CEO.
2.	The Dhaka WASA top management is highly capable and provides strong leadership.
3.	Dhaka WASA has a monopoly on water supply and sewerage in Dhaka.
4.	The GoB and ADB feel they can very much rely on Dhaka WASA.
5.	Dhaka WASA retains capable and well experienced employees.
6.	Dhaka WASA permanent employees have excellent employment conditions, including pensions that, on death of the former employee, is passed on to their spouse. Staff retention is very high.
7.	Dhaka WASA has a strong asset base of land, DTWs, treatment plants, offices, staff quarters, etc.
8.	Dhaka WASA is operating on a commercial basis.
	<b>WEAKNESSES</b>
1.	Other than in the engineering side of the organization, there is often limited opportunity for promotion. Employees can remain in the same position for many years (CBS heard this complaint in the Asad Gate Central Laboratory). This situation can lead to lack of motivation to perform well and frustration.

2.	There is currently high dependence on a groundwater resource that is diminishing.
3.	There is limited sewerage coverage (20%).
4.	The relationship with the City Corporations, which are politically led organizations, is sometimes difficult. The time required to obtain permission for road cutting can delay projects and hinder Dhaka WASA maintenance activities.
5.	The organization under the MD is intended (by the WASA Act?) to be operated by four DMDs recruited from outside Dhaka WASA. DMDs recruited from outside the Dhaka WASA organization generally lack experience in managing water utilities. For that reason, two DMD positions are currently filled by Directors who are former Dhaka WASA management staff.
6.	Various employee groups may have a vested interest to not cooperate with certain management initiatives.
7.	The accounting operation still needs improvement. Currently accounting functions partly computerized and partly manual.
<b>OPPORTUNITIES</b>	
1.	Population growth and the spreading of urban Dhaka inevitably leads to business growth for Dhaka WASA.
<b>THREATS</b>	
1.	The diminishing groundwater resource is a serious threat that is being addressed by increasing use of surface water sources and surface water treatment plants.
2.	Pollution of surface water sources used by Dhaka WASA for water supply is also a serious threat.
3.	Sewerage development is necessary but it is costly and funding it is difficult.
4.	Project implementation delays caused by land acquisition problems, road cutting permissions, court cases, outside parties with vested interests and troublemaking journalism is a serious hindrance to meeting growing demands for water.

## Appendix 2: Dhaka WASA Organization Chart

# Organogram of Dhaka WASA





### Appendix 3: References

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