



**ASIAN INFRASTRUCTURE
INVESTMENT BANK**

PD00398-BGD

October 16, 2020

**Project Document
of the Asian Infrastructure Investment Bank**

Sovereign-backed Financing

**People's Republic of Bangladesh
Rural Water, Sanitation and Hygiene for Human Capital Development Project**

Currency Equivalents

(As at May 18, 2020)

Currency Unit – Bangladeshi Taka (BDT)

BDT1.00 = USD0.0118

USD1.00 = BDT84.9250

Borrower's Fiscal year

July 1 – June 30

Abbreviations

AIIB	Asian Infrastructure Investment Bank
BCC	Behavioral Change Communications
COVID-19	Coronavirus Infectious Disease of 2019
DPHE	Department of Public Health Engineering
EA	Economic Analysis
ES	Environmental and Social
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESP	Environmental and Social Policy
FSM	Fecal Sludge Management
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GoB	Government of Bangladesh
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IDA	International Development Association
IRR	Internal Rate of Return
IMF	International Monetary Fund
IUFR	Interim Unaudited Financial Report
LE	Local Entrepreneur
LGD	Local Government Division
LMP	Labor Management Procedure
MTR	Mid-term Review
MDB	Multilateral Development Bank
MFI	Micro Finance Institution
MoHFW	Ministry of Health and Family Welfare
MoLGRD&C	Ministry of Local Government, Rural Development & Cooperatives
O&M	Operations and Maintenance
OP	Operational Policy
PIM	Project Implementation Manual
PPM	Project-affected People's Mechanism
PPSD	Project Procurement Strategy for Development
PSC	Project Steering Committee

PKSF	Palli Karma-Sahayak Foundation
NSWSS	National Strategy for Water Supply and Sanitation
SDG	Sustainable Development Goal
SEP	Stakeholders Engagement Plan
UP	Union Parishad
USD	United States Dollar
WASH	Water, Sanitation and Hygiene
WB	World Bank

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1. Summary Sheet
The People's Republic of Bangladesh
Rural Water, Sanitation and Hygiene for Human Capital Development Project

Project No.	PD000398-BGD
Borrower	The People's Republic of Bangladesh
Project Implementation Agencies	Department of Public Health Engineering (DPHE) and Palli Karma-Sahayak Foundation (PKSF)
Sector	Water
Subsector	Water Supply and Sanitation
Project Objective	(i) To improve access to 'safely-managed' water supply and sanitation in selected areas of rural Bangladesh; and (ii) to strengthen sector institutional capacity for water and sanitation.
Project Description	Component 1: Investments in water supply. Component 2: Investments in sanitation and hygiene. Component 3: Institutional strengthening. Component 4: Project implementation and management. Component 5: COVID-19 emergency response. Component 6: Contingent emergency response.
Implementation Period	Start Date: November 2020 End Date: May 2025
Expected Loan Closing Date	November 20, 2025
Cost and Financing Plan	Project cost: USD550.5 million Financing Plan: AIIB loan: USD200 million World Bank's IDA Credit: USD200 million Govt of Bangladesh (GoB): USD150.50 million
Size and Terms of AIIB Loan	USD200 million. The loan will have a final maturity of 35 years, including a grace period of five years, and will be made on standard FSL terms for sovereign-backed loans, with the corresponding average maturity.
Cofinancing (Size and Terms)	World Bank's IDA: USD200 million.
Environmental and Social Category	WB Category Moderate Risk (equivalent to Category B if AIIB's ESP were applicable)
Risk (Low/Medium/High)	Medium
Conditions of Effectiveness	(i) Effectiveness of the Project's Co-Lenders' Agreement between WB and AIIB; (ii) Effectiveness of the Financing Agreement between WB and Bangladesh; (iii) Effectiveness of a Project Agreement between PKSF and AIIB; (iv) Effectiveness of a Subsidiary Agreement between GoB and PKSF; (v) Project Implementation Manual (PIM), in form and substance satisfactory to AIIB, has been put into effect by the GoB and

	PKSF; and (vi) GoB project director and PKSF project coordinator have been recruited.
Key Covenants/Conditions for Disbursement	No disbursement will be made for emergency expenditures under Component 6 unless the criteria for withdrawals for emergency expenditures enumerated in the WB's Financing Agreement have been satisfied.
Policy Assurance	The Vice President, Policy and Strategy, confirms an overall assurance that AIIB is in compliance with the policies applicable to the project.

President	Jin Liqun
Vice President	D.J. Pandian
Director General	Rajat Misra (Acting)
Manager	Rajat Misra
Team Leader	Toshiaki Keicho, Sr. Investment Operations Specialist-Urban
Team Members	Raqib Ahmed Chowdhury, Investment Operations Specialist Jurminla Jurminla, Procurement Specialist Yogesh Malla, Financial Management Specialist Somnath Basu, Principal Social Development Specialist Zhaojing Mu, Environment Specialist Mengmeng He, Finance Associate Antong Hu, Administrative Assistant Christopher Damandl, Counsel Ankur Agrawal, Young Professional Zahed Khan, Consultant

2. Project Description and Rationale

A. Rationale

1. **Country Priority.** Bangladesh is one of the most densely populated countries in the world (1,130 persons per square km), with a population of about 164.7 million over an area of 144,415 square km. Gross Domestic Product (GDP) growth averaged close to 6 percent annually since 2000 and, according to official estimates, accelerated to over 8 percent in FY2019. In view of this performance, the country has been classified as a Lower Middle-Income Country by the World Bank (WB). Strong labor market gains contributed to a sharp decline in poverty, with the national poverty rate falling from 48.9 to 24.3 percent between 2000 and 2016, while extreme poverty declined from 34.3 to 12.9 percent. Nevertheless, significant human capital development challenges remain as Bangladesh aspires to meet its target of eliminating poverty by 2030 and attaining the upper middle-income status by 2031.

2. The population in Bangladesh is predominantly rural (63 percent living in rural areas), so continued investment in rural areas is important to realize the country's human capital potential. For instance, an estimated 35 percent of the population in rural areas lives below the poverty line, while nationally it is 24 percent. At the same time, the rural population suffers insufficient access to quality basic services, such as education, health clinics, and adequate roads, and is most vulnerable to ever-increasing climate change threats, such as sea level rise, floods, droughts and extreme temperature.

3. Bangladesh is highly vulnerable to health hazards, including the COVID-19 pandemic, which may reverse the human capital development progress achieved in recent years. The country's high population density, even in rural areas, and weak capacity in managing public health emergencies make it prone to high rates of morbidity from increasing outbreaks of infectious diseases, including cholera, dengue fever, diphtheria, diarrhea, typhoid, and COVID-19. Furthermore, outbreaks of infectious diseases typically follow the occurrence of natural disasters, to which Bangladesh is very vulnerable as the world's seventh most affected country over the period 1999-2018 according to the Global Climate Risk Index.

4. **Institutional Context.** Access to water, sanitation and hygiene (WASH) services in rural Bangladesh improved much over time, but significant challenges remain for the government to achieve the United Nations' Sustainable Development Goal (SDG) 6 on clean water and sanitation. These challenges include:

- a) Water supply. The proliferation of tube wells has given rise to concerns about: (i) sustainability, where excessive withdrawal may threaten water security in the long term; and (ii) water quality as there are few practical solutions to regulating and monitoring tube wells against arsenic and fecal contamination. Indeed, the rural population using 'safely-managed'¹ water supply barely increased from 59 percent

¹ UNICEF-WHO Joint Monitoring Programme (JMP) ladders for drinking water and sanitation divide the "improved" category to three further rungs: limited, basic, and safely-managed. The safely-managed category is the highest standard and is required to meet the UN's SDG 6. A safely-managed drinking water service is defined as one located on premises, available when needed and free from contamination. A safely-managed sanitation facility is one where excreta is safely disposed of in situ or treated off-site.

in 2000 to 61 percent in 2017.² Furthermore, the job of fetching water almost always falls to the girls and women of a household—in 2013, females had 90 percent of the share of water collection responsibility. Treated piped water may address these issues, but household piped water connections in rural areas are rare, with a coverage just at 3 percent in 2017. Existing schemes have faced significant operation and maintenance (O&M) challenges due to weak technical backstopping mechanisms, small customer base, and a combination of low willingness to pay and low willingness to charge for water.³ Out of about 1,900 rural piped water schemes that are currently functional in the nation, none are being metered, and the users pay a flat tariff per household.

- b) Sanitation. While low cost options have significantly increased access to ‘improved’ sanitation, in 2017, only 32 percent of the rural population had access to a ‘safely-managed’ sanitation service, and 35 percent still were using ‘unimproved’ sanitation facilities.⁴ Although inequality in access to at least ‘basic’ sanitation services has lessened since 2000,⁵ the difference between the poorest and richest wealth quintile of the population was still stark in 2017, nationally at 23 percent and 75 percent respectively. Access to piped sewerage collection in rural areas is less than 1 percent, and there is no available household data on on-site fecal sludge management (FSM), such as information on pit or septic tank emptying practices or waste disposal and treatment. It is believed most of the fecal sludge is not properly disposed in rural areas, and consequently, contamination of shallow ground water tables and of surface water bodies is a significant concern.
- c) Handwashing. Although 86 percent of the rural population has access to a designated handwashing facility, only 26 percent has access to facilities that have soap and water.⁶ Even more concerning is the practice of handwashing—only 14 percent of all persons washed both hands with soap after defecation or before eating.⁷ Easy access to clean and reliable water supply is needed for handwashing and cleaning and disinfecting surfaces where germs and viruses settle. Handwashing with soap is one of the most important things to slow infectious diseases, such as diarrhea, cholera, typhoid, and COVID-19.
- d) WASH in public places, healthcare facilities, and community secondary schools. Scattered evidence suggests that inadequate WASH access in places outside the home is a significant barrier in people’s daily lives. Women and girls find it especially difficult to use public toilets, as few are deemed gender-appropriate and secure. WASH in healthcare facilities is of paramount importance due to its implications for health and safety of healthcare workers and patrons alike. However, while 86 percent of rural healthcare facilities have access to an improved water source, only

² UNICEF and WHO.

³ World Bank. 2018. *ICR for Bangladesh Rural Water Supply and Sanitation Project*.

⁴ UNICEF and WHO.

⁵ In 2000, the access rate to at least ‘basic’ sanitation for the poorest wealth quintile was 8 percent, while that for the richest wealth quintile was 63 percent.

⁶ UNICEF and WHO.

⁷ Halder et al. 2010. BMC Public Health 10:545 (<http://www.biomedcentral.com/1471-2458/10/545>).

42 percent have it on the premises.⁸ Of the 78 percent of rural healthcare facilities that have access to an improved sanitation facility for clients, only 12 percent have designated toilets for women.⁹

- e) Menstrual hygiene. Only 23 percent of women use appropriate menstrual materials, while many repeatedly use cloths that are not adequately washed and dried between uses. This is an overlooked path by which bacteria might affect women's health through incidence of urinary tract infections or other complications. In addition, surveys have found high levels of social misunderstanding about menstruation. About 74 percent of students, for instance, think that activities such as going out, cooking, and eating certain types of food are forbidden during menstruation. Moreover, a quarter of females report missing school when they are menstruating. Currently, only 6 percent of schools provide education on menstrual hygiene management, and only 36 percent of women had prior knowledge about menstruation before their first period.¹⁰ Women are under-represented in the sector, and WASH-related decision making is often dominated by men.
- f) Climate change. The WASH sector in Bangladesh is affected by weather and climate change events, which translate into reduced drinking water availability and quality and also lower performance of sanitation and hygiene services, exacerbating the issues outlined above. It is vital that that climate resilience becomes integral to strategic planning for WASH.

5. The current administration's vision¹¹ to enhance the WASH service standards in rural areas to be comparable to those in urban areas is a step in the right direction toward meeting the SDG 6, and a new national WASH strategy has been drafted accordingly. This vision has drawn much public attention and allowed the Ministry of Local Government, Rural Development, and Cooperatives (MoLGRD&C), the ministry in charge of the sector, to shift in focus from hand-pumped tube wells to piped water schemes in rural areas, in line with the SDG 6 service standards. The government is in the process of formalizing this commitment in its policy documents, with the National Strategy for Water Supply and Sanitation (NSWSS) waiting to be approved by the cabinet. The approval of the NSWSS will be an important achievement, setting the 'safely-managed' service standard as the national norm, mandated under the SDG 6.

6. Officially, the Local Government Act of 2009 delegated the responsibility for provision of WASH services in rural areas to Union Parishads (UPs)¹², and MoLGRD&C is only responsible for sector planning and strategy, policy, and standards development. However, MoLGRD&C still plays a central role in WASH service provision in rural areas, and the transfer of responsibility has been limited. In practice, the Department of Public

⁸ WHO and UNICEF. 2019. *WASH in health care facilities: Global baseline report 2019*. Geneva.

⁹ NIPORT, ACPR and ICF. 2018. *Bangladesh Health Facility Survey 2014 & 2017*.

¹⁰ World Bank. 2018.

¹¹ Dhaka Tribune. 19 August 2018.

¹² There are five tiers of government in Bangladesh: (i) the country is divided into eight divisions; (ii) the divisions are divided into 64 districts; (iii) the districts are divided into 491 sub-districts, or Upazilas; (iv) Upazilas are further subdivided into 4,554 Union Parishads (UPs) and 323 Paurasabha (or town councils or municipalities), and there are 12 city corporations that are separate from Upazilas; and (v) the city corporations and municipalities are divided into wards, and each UP is made up of nine wards, each consisting of one or two villages. UP is the oldest and lowest tier of the local government representing 10 to 15 villages with around 5,000 households. Each UP is composed of 13 elected representatives including a chair, nine members (one from each ward), and three women elected members.

Health Engineering (DPHE) under MoLGRD&C continues to design, finance, and install water supply infrastructure, handing it over to the communities or the private sector for O&M. As for the sanitation facilities, households are responsible for building, owning, and operating them on their premises. While UPs are in charge of ensuring compliance, their monitoring mechanisms and accountability remain weak. Thus, there is a need to clarify the role of UPs in WASH service provision, both during the planning process and O&M.

7. **Strategic fit for AIIB.** The project is aligned with AIIB's key priority area of promoting sustainable infrastructure and it also fits within the strategic focus of AIIB's water sector strategy, which was approved in May 2020. The project complements AIIB's COVID-19 Recovery Facility by contributing to preventing disease and protecting human health during infectious disease outbreaks, including the current COVID-19 pandemic, by increasing access to quality WASH services at home and in public spaces—including healthcare facilities—and enhancing their proper use, which are key to preventing the spread of germs and viruses. Behavioral change is also the focus of the project, where the importance of investing in quality WASH facilities and proper handwashing will be emphasized. Furthermore, the project includes a sub-component on COVID-19 emergency response, through which urgent WASH needs in priority areas will be addressed in a quick, just-in-time manner.

8. **Value addition by AIIB.** The project will contribute to closing the gap between urban and rural areas in the country in terms of access to infrastructure services, while supporting GoB's efforts to improve the living conditions of the rural population in the country. AIIB's financing will allow the project to almost double the number of villages and people benefiting from the project.

9. **Value addition to AIIB.** The project is a good opportunity for AIIB to gain experience in improving rural water and sanitation services in partnership with the World Bank. The emergency response component of the project is also expected to provide important lessons for AIIB regarding rapid reallocation of funds for emergency response purposes.

10. **Lessons learnt from previous projects.** Development of piped water supply in rural Bangladesh was in part as a response to the widespread arsenic contamination, revealed in the late 1990s. But a sustainable and scalable delivery model to overcome this problem has not been fully established yet. Early experience has shown that the ability of the communities to run rural piped water schemes by themselves was limited, due to technical complication, small customer base, and large investment requirements. The World Bank has worked together with GoB since 1998 to introduce rural piped water supply in three consecutive phases. Each phase intended to pilot and scale-up the private sector participation approach, which appeared to be the best option for ensuring sustainability. The World Bank's experience highlights a number of important issues, including: (i) need for subsidies for capital costs; (ii) challenges with tariff collection; (iii) unpredictable local politics; and (iv) lack of professional and entrepreneurial capacity to successfully operate and manage schemes once built. Ensuring private sector participation, particularly by large investors in the rural piped water sector, was a challenge due to volatile community demand, user reluctance to pay tariffs, low profitability, liability of long-term investment, closed option for exit, etc. The key lessons

for addressing these issues include: (i) clustering of multiple schemes to attract bigger and more capable private sector players; (ii) a shorter operational period with an option of contract renewal; (iii) stronger partnership between private sector, communities and local governments and clarity of their roles; (iv) facilitation of operator-consumer relationships; (v) continuous monitoring; (vi) technical and financial assistance for business expansion and growth; and (vii) prioritizing communities with commitment and willingness to pay.

B. Project Objective and Expected Results

11. **Project Objective.** The Project Objectives are to: (i) improve access to ‘safely-managed’ water supply and sanitation in selected areas of rural Bangladesh; and (ii) strengthen sector institutional capacity for water and sanitation.

12. **Expected Results.** The Project Objectives will be evaluated against the following indicators:

- (i) The number of people provided with access to ‘safely-managed’ water services;
- (ii) The number of people provided with access to ‘safely-managed’ sanitation services; and
- (iii) Monitoring system established and in use in project Upazilas.

13. **Expected Beneficiaries.** The project beneficiaries include members of households, the public, national and local governments, and the private sector. Through AIB and WB financing, it is estimated that about 4.5 million people living in 78 Upazilas in Mymensingh, Rangpur, Chittagong, and Sylhet Divisions¹³ will have access to ‘safely-managed’ WASH facilities at home by the end of project implementation. More people—about 1 million—will have access to ‘safely-managed’ WASH facilities in public spaces, including community clinics. Further 2.5 million people are expected to gain access to ‘safely-managed’ WASH facilities through counterpart funding. The enhanced access to ‘safely-managed’ WASH facilities may especially benefit children, women, the vulnerable groups, since they are most susceptible to health consequences of non-access and subsequent deprivation of life-long economic and educational opportunities. The project will also benefit national and local governments by supporting institutional strengthening activities. In addition, the private sector will benefit from the project through increased capital for WASH loans, and market creating and capacity building activities to deliver ‘safely-managed’ WASH facilities. From the COVID-19 emergency response component, it is estimated that about 700,000 people across Bangladesh will benefit.

C. Description and Components

14. The project will consist of the following six components.

15. **Component 1: Investments in water supply.**

- (i) Sub-component 1.1 (Large piped water schemes) will carry out investments in

¹³ Sylhet Division has the highest rate of children suffering from malnutrition and stunted growth, followed by Chittagong. At least 45 percent of the children below the age of five in Sylhet have stunted growth, while 39 percent are underweight, according to a study titled “Undernutrition Maps of Bangladesh 2012.” In Chittagong, 42 percent of the children are suffering from stunted growth and 37 percent are underweight, according to the data from the Population and Housing Census 2011, Child and Mother Nutrition Survey 2012, and Health and Morbidity Status Survey 2012. Rangpur and Barisal Divisions have the highest poverty rates among the four.

large piped water schemes to support safe water scarce communities of 300-700 households.

- (ii) Sub-component 1.2 (Small piped water schemes) will carry out investments in small piped water schemes to support safe water scarce communities with each scheme serving 30-40 households.
- (iii) Sub-component 1.3 (Household loans for water improvements) will enable about 60,000 households to borrow from MFIs for household water facility improvements.
- (iv) Sub-component 1.4 (Water supply market development) will provide MFI loans to local water entrepreneurs to respond to the household demand for certified water facilities and expand their business.
- (v) Sub-component 1.5 (Feasibility studies in high climate risk regions) will identify sources for drinking water and examine technological options and their financial viability in Southern Bangladesh.

16. **Component 2: Investments in sanitation and hygiene.**

- (i) Sub-component 2.1 (Public sanitation and hygiene facilities) will invest in sanitation and hygiene facilities in high pedestrian traffic locations (such as markets, bus stations) and community health clinics.
- (ii) Sub-component 2.2 (Sanitation and hygiene facilities for households) will provide two-pit latrines and handwashing stations to households through MFI loans or grants, depending on their income level.
- (iii) Sub-component 2.3 (Sanitation and hygiene market development) will provide MFI loans to local sanitation and hygiene entrepreneurs to expand their businesses and offer them training on proper installation and maintenance of SDG 6 compliant WASH facility products.
- (iv) Sub-component 2.4 (Innovation) will promote innovation to localize innovative WASH technologies, especially in Fecal Sludge Management (FSM), to pilot and implement the Rural Fecal Sludge Management Framework through provision of innovation grants.
- (v) Sub-component 2.5 (Behavioral change communication campaign) will support a behavioral change communication (BCC) campaign to raise WASH awareness, provide training for staff of community health clinics, target group sessions and the Ministry of Health and Family Welfare (MoHFW).

17. **Component 3: Institutional strengthening.**

- (i) Sub-component 3.1 (Strengthening of policies and regulatory framework) will provide technical assistance to support drafting policy documents that are critical in implementing the newly drafted National Strategy for Water Supply and Sanitation (NSWSS).
- (ii) Sub-component 3.2 (Capacity building) will carry out capacity-building activities through training to central and local government officials working in the WASH and converging sectors who are responsible for implementation of the NSWSS. This sub-component will also include investments in information technology (IT) hardware and software to support the sector institutions.

18. **Component 4: Project implementation and management.**

- (i) Sub-component 4.1 (DPHE project management) will support the DPHE's capacity for project implementation and monitoring through, among others, procurement, fiduciary, and environmental and social (E&S) safeguards management; development and implementation of the stakeholder engagement plan; establishment of grievance redress mechanisms; engagement of consultants for the development of project monitoring software; development of a communications campaign; and support resources for improving water quality monitoring by DPHE laboratories in the project areas.
- (ii) Sub-component 4.2 (PKSF project management) will support the PKSF's capacity for the project implementation and monitoring through, among others, procurement, fiduciary, and E&S safeguards management; development and implementation of the stakeholder engagement plan; engagement of consultants for the development of project monitoring software; development of a communications campaigns including awareness generation and BCC; hiring of independent verification consultants (IVCs) for the verification of outputs; training and monitoring; undertaking audits; and project reporting.

19. **Component 5: COVID-19 emergency response.** This component will provide quick, just-in-time WASH services where needed in the COVID-19 pandemic hotspots, to cope with the fast-changing COVID-19 situation, among others, through (i) setting up handwashing stations/devices (fixed and portable) with running water, proper drainage, and sanitation facilities; (ii) providing quality water access or delivery points, compact water treatment plants, and water kiosks; and (iii) providing emergency operational supplies, such as personal protective equipment, for water supply and sanitation service providers to ensure disaster preparedness and continuity of service delivery.

20. **Component 6: Contingent emergency response.** This is a provisional zero amount component, which will allow for rapid reallocation of loan proceeds from other project components during an emergency.

D. Cost and Financing Plan

21. To achieve its objectives, the project will support six components, financed by AIIB, WB and GoB. A breakdown of costs and sources of funds by components are presented in the table below. A co-lenders' agreement will be signed by AIIB and WB in accordance with the Co-Financing Framework Agreement between the two banks. AIIB and WB will co-finance the project in equal shares, with all components financed jointly.

Table 1. Project Cost and Financing Plan

Item	Project Cost (USD m)	Financing (USD m and %)		
		AIIB	World Bank	GoB*
Component 1	121.9	51.65	51.65	18.6
Component 2	387.8	131.45	131.45	124.9
Component 3	4.5	2.25	2.25	-
Component 4	16.3	4.65	4.65	7.0
Component 5	20.0	10.0	10.0	-

Component 6	-	-	-	-
Grand Total	550.50	200.00 (36.33%)	200.00 (36.33%)	150.50 (27.34%)

*GOB's counterpart funds include parallel financing for such items as vehicles, fuel, salaries and allowances to civil servants, and expenditures associated with land acquisition and resettlement (under Component 4), as well as MFI loans to local entrepreneurs (under Components 1 and 2).

22. **Climate finance.** AIIB adheres to the joint MDB climate finance tracking methods in tracking climate finance in its projects. Based on the principle of conservativeness, 5% of AIIB's financing for Components 1 and 2 (USD9.15 million) can be considered as adaptation finance as the following adaptation measures are incorporated into the project design: (i) elevated water pumping stations above the flood level under Component 1; and (ii) elevated latrine superstructure under Component 2. These adaptation measures will reduce the project's vulnerability to climate change as described in the paragraph 61.

E. Implementation Arrangements

23. **Implementation period.** The project will be implemented from November 2020 to May 2025. The loan closing date will be November 20, 2025.

24. **Implementation Management.** DPHE and Palli Karma-Sahayak Foundation (PKSF) will be the implementing agencies of the project. The project will be managed by two PMUs collaborating closely.

25. DPHE under MoLGRD&C will play the main role in the development of public infrastructure under the project. It has considerable experience in executing donor-funded projects, with capacity for design and procurement, construction, and commissioning of WASH facilities. DPHE will be responsible for the construction of piped water schemes (Sub-components 1.1 and 1.2), providing public WASH facilities, including in healthcare centers and non-government schools (Sub-component 2.1), and offering sanitation grants for the poorest (Sub-component 2.2.b). DPHE will also carry out water supply feasibility studies in high climate risk areas (Sub-component 1.5), pilot innovations (Sub-component 2.4), implement WASH behavioral change communications (BCC) campaign (Sub-component 2.5) and carry out institutional reforms and capacity building activities (Sub-component 3). The PMU will comprise a full-time project director, a deputy project director, and personnel with specialization in financial management, procurement, monitoring and evaluation, environment and social and others, posted from within DPHE and recruited from the open market. DPHE will be the nodal agency responsible for project reporting.

26. The PKSF will play the main role in the development of private assets under the project. It is a development financing institution set up by the Government of Bangladesh as a 'not-for-profit' company and works with MFIs that offer microcredits to poor and non-poor borrowers. PKSF has considerable experience in managing donor-funded projects in various sectors. Under this project, PKSF will use IDA and AIIB financing to offer capital to retail MFIs, which in turn will give loans to households to upgrade the WASH facilities at their residence in the project areas (Sub-components 1.3 and 2.2.a). In addition, PKSF will extend capacity building support to retail MFIs and local entrepreneurs for creating demand and installing SDG 6 compliant WASH facilities

(Sub-components 1.4, 2.3, and 2.5). The PMU will comprise a full-time project coordinator, a deputy project coordinator, and other personnel with specialization in financial management, procurement, monitoring and evaluation, environment and social and others, posted from within PKSF and recruited from the open market.

27. At the national level, two Project Steering Committees (PSCs) will be established to provide overall guidance and policy direction. One will be headed by the Local Government Division (LGD) under the MoLGRD&C to oversee the subcomponents implemented by the DPHE, and the other will be led by the Financial Institutions Division (FID) under the Ministry of Finance (MoF) to oversee the subcomponents implemented by the PKSF. The respective PSCs will meet at least twice a year, or more frequently if needed, to take stock of project progress and make course corrections. Both PSCs will consist of representatives from the DPHE, PKSF, FID, and the Economic Relations Division under the MoF, the Ministry of Health and Family Welfare (MoHFW), and the Planning Commission. In order to ensure strong coordination between the LGD and FID as well as their two implementing agencies (that is, the DPHE and PKSF), joint meetings of the two PSCs will be organized periodically, which will be jointly chaired by the LGD and FID.

28. Engaging the UPs and MoHFW is central to the project's success. Enhancing the sense of ownership and capacity of UPs to plan, deliver, and manage WASH services is a top priority. The project intends to achieve this through clarifying the roles of UPs in WASH service delivery in policy documents and training responsible UP officials. The MoHFW will be leveraged through its health workers, who will be trained to deliver messages on WASH behavioral change through household visits, target group sessions, and community health clinics. A WASH Coordination Committee will also be formed at each UP with representatives from DPHE, PKSF's MFI partners, and health workers to facilitate local level coordination.

29. **Monitoring and Evaluation.** DPHE will be responsible for managing a common web-based platform, which will be developed to track the project's progress based on the results framework. The platform will support a participatory M&E, which will allow project stakeholders—such as the MFIs, UPs, the local DPHE and PKSF officials, and consultants—to collect data on project progress. Collected data will include geospatial data with photographs of the outputs, along with the information on beneficiary households, to further analyze and verify the project outputs. PKSF will deploy a number of Independent Verification Consultants to continuously monitor and verify the project outputs during the entire project timeline. DPHE and PKSF will also report quarterly on: (a) updated implementation schedules by component; (b) commitment and disbursement by component; and (c) findings, recommendations, agreements reached on key implementation issues. The quarterly progress report will be submitted by DPHE to the Bank and relevant line ministries. In addition, the Bank, DPHE, PKSF, and other stakeholders will carry out annual progress reviews and a mid-term review of project performance.

30. **AIIB's Implementation Support.** During project implementation, the World Bank plans to visit the project sites periodically to support implementation and monitor progress. The Bank will join these supervision missions as necessary. The World Bank will provide the Bank with copies of all relevant documents, reports, recommendations,

no-objections and communications (whether external or internal) received or sent by the World Bank in connection with any project activity.

31. **Procurement.** All goods, works, non-consulting services and consulting services for the project and financed by AIIB will be procured in accordance with the World Bank Procurement Regulations for IPF Borrowers as the World Bank is the lead co-financer. The rights and obligations between the AIIB and the World Bank will be governed by the Co-financing Framework Agreement and project's co-lender's agreement. The project will be subject to the World Bank's Anticorruption Guidelines, dated October 15, 2006, revised on January 2011 and July 2016. The World Bank's procurement regulations and Anti-corruption guidelines are materially consistent with the Bank's Interim Directive – Procurement Instructions to Recipients and the Bank's Prohibited Practices Policy and therefore their application under the project is acceptable to the Bank.

32. **Financial Management.** DPHE and PKSf will be responsible for overall project financial management of their respective components. The two PMUs will be established in DPHE and PKSf respectively. PMUs will be staffed with qualified finance/accounts staff responsible for maintaining acceptable project financial management. PMUs shall prepare annual work plan and budget as per procurement plans and financing agreements.

33. PMUs shall prepare and submit Interim Unaudited Financial Reports (IUFRs) to IDA and AIIB within 45 days of end of each fiscal quarter. The project financial statements prepared by PMUs shall be audited annually by the independent auditors, acceptable to IDA and AIIB. The annual audited project financial statements shall be submitted to IDA and AIIB within six months after the end of each fiscal year.

34. The project shall follow report-based disbursement mechanism and advances to two Designated Accounts (DAs) shall be deposited in a pooled bank accounts (Convertible Taka Special Account - CONTASA) opened in a commercial bank acceptable to IDA and AIIB. AIIB shall advance an amount to DAs to meet the estimated expenditures for the six months period, as forecasted in the IUFRs. The loan shall also allow AIIB's standard disbursement methods, such as: (i) payments against Special Commitments; (ii) reimbursement of eligible expenditures; and (iii) direct payments. Disbursement and Financial Information Letter (DFIL) shall detail out the authorized signatories, DA conditionalities, process of submitting claims and other terms and conditions of disbursements related to the project.

3. Project Assessment

A. Technical

35. **Project Design.** Continuously pressurized water supply from deep groundwater aquifers prioritizes drinking water safety and security. The project will source water that is compliant with the Bangladesh Drinking Water Quality Standards with a focus on water safety (primarily microbial, arsenic, and manganese contamination) and user acceptability (primarily iron and salinity). Support extended for the piped water schemes includes the drilling and casing of wells in the deep aquifers, water quality and drawdown testing, equipping and fitting with submersible electric pumps and overhead tanks of a sufficient size to ensure the continuous availability of safe water. Given the microbial

contamination risks associated with intermittent schemes, the piped water schemes will deliver a continuously pressurized service to the household connections. If households get MFI water loans through the project (i.e., Sub-component 1.3), the plumbing installed by local entrepreneurs within the household will be quality checked to maintain the safety of drinking water through to the point of consumption.

36. The twin alternating offset pit latrines are designed to facilitate compliance with the 'safely-managed' sanitation service standard. Most of the population in Bangladesh utilizes direct pit latrines that are often unhygienic and extremely difficult to empty. Offset pit latrines are hygienic, increase the convenience (e.g. enabling the commode to be situated within the house), and facilitate easier emptying. When offset pit latrines have two alternating pits, the pit that is offline can neutralize the pathogens given sufficient time, enabling the safe removal of the fecal sludge following WHO guidelines. Adherence to the twin alternating offset pit latrine standard, along with the provision of training to households and local entrepreneurs on the correct procedures for O&M and safe disposal of fecal sludge, is considered to facilitate compliance to the SDG 6.2 'safely-managed' sanitation service standard.

37. The WASH infrastructure investments will incorporate climate smart designs. The assessments of ground water sources for piped water schemes will consider water resource availability in view of climate vulnerability and extreme weather conditions. To promote energy efficiency, solar powered photovoltaic (PV) pumping systems with elevated platforms above the flood level would be considered where feasible for the water supply schemes. Offset pit latrines are climate resilient by design, able to function even when the pits are underwater. The latrine superstructures will be built on raised platforms above the flood level to enhance resilience against heavy rain and flooding. Advice to households and pit emptiers on the safe use of dry fecal sludge as a soil conditioner would facilitate the productive re-use of this sludge and reduce the use of synthetic fertilizers, which are greenhouse gas intensive.

38. **Operational sustainability.** The operational sustainability of rural piped water schemes will be ensured by engaging the private sector and employing a series of risk mitigating measures. In order to achieve economies of scale and attract bigger and more professional engineering firms, the rural water supply schemes under the project will be clustered together to have larger tenders and contracts. Such clustering can mitigate many of the risks of private sector models related to scale, expertise and, more importantly, revenue generation. The project will also strengthen DPHE's and UPs' capacity and help establish the distinct roles between communities, local governments and the private sector regarding ownership of the physical assets procured, tariff setting process, O&M aspects (including repairs and replacement) and performance monitoring. The financial sustainability will also be strengthened through the introduction of a volumetric tariff and fixed payments to a joint reserve accounts for major repairs. During feasibility study of each water supply sub-project, community consultation and a socio-economic survey will be undertaken, which will involve assessment of community's willingness and ability to pay for improved services. Then, scheme planning will proceed only for the communities where there is sufficient commitment to the scheme on the part of local leaders, and sufficient ability and willingness to pay on the part of prospective consumers.

39. Overall, such an approach is expected to ensure adequate cost recovery as well as sustainability of project schemes over time. The financial analysis (Annex 3) shows that both the large piped water supply schemes as well as the small piped water supply schemes are financially viable, as long as they achieve the target number of household connections, ensure an adequate tariff collection rates and control the O&M costs as well as adjustments of the tariffs if needed. A similar analysis applies in the case of investments for public toilets by private operators. All the major investments under the project components implemented by DPHE in the 78 Upazilas, as such, are projected to be operationally sustainable.

B. Economic and Financial Analysis

40. **Economic Analysis.** As a lead co-financier, the World Bank has undertaken economic and financial analysis of the proposed project. The economic analysis assessed the economic viability of project in terms of economic internal rate of return (EIRR) and economic net present value (ENPV). A Cost-Benefit Analysis (CBA) was carried out to assess the economic viability of the project comparing “with” and “without-project” scenarios. The considered costs include economic cost of initial construction costs and economic O&M costs. The expected project benefits include: (i) Treatment cost savings and increased working days stemming from the averted incidents of diarrheal diseases among the targeted beneficiaries of sanitation investments; (ii) Costs of time saved arising from on-premise piped water supply; (iii) Treatment cost savings and increased working days stemming from the averted incidents of diarrheal diseases among the targeted beneficiaries of BCC campaigns; and (iv) The environmental benefits (or costs) arising from GHG emission.

41. The Economic Internal Rate of Return (EIRR) was estimated at 33 percent and Economic Net Present Value (ENPV) at USD514 million based on a 10 percent discount rate. Sensitivity analysis has been carried out with respect to a 20 percent increase in capital cost, a 20 percent increase in O&M cost, a 20 percent decrease in economic benefits, a 20 percent decrease in health benefits related to BCC, an implementation start delay of 2 year and an implementation prolongation of 2 years. The EIRR remains above the economic opportunity cost of capital (EOCC) of 10 percent for all the scenarios. The economic viability of the project will increase further if intangible benefits such as improvement in living standards, well-being and environmental quality are included in the analysis. The approach and detailed results are presented in Annex 3.

42. **Financial Analysis.** A comprehensive financial analysis has been carried out to assess the operational sustainability of the project over the life of the project (please see Annex 3 for details). The NPV of private operator’s net income (after O&M costs, capital repair and replacement (CRR) costs and the lease fee) at a discount rate of 16.5 percent to cover the 10 percent opportunity cost of capital and 6.5 percent inflation is as follows:

Type	NPV (in BDT)	NPV (in USD)
A large piped water scheme	1,585,553	18,670.04
A small piped water scheme	101,174	1,191.33
A public toilet	440,381	5,185.53

The IRR is not calculated because CAPEX is 100 percent subsidized.

- **Large piped water scheme:** The financial analysis shows that the scheme is financially attractive to the private operator and operationally sustainable. The O&M costs can be supported by tariff revenues from Year 0. When the lease fee to the UP is paid and CRR costs are considered from Year 0 to 20, the net income to the private operator becomes negative during the first and second year of operation, but the cumulative net income becomes positive in Year 3. Further, the sensitivity analysis results show that the scheme can withstand 20% decrease in each of the key revenue drivers and cost drivers and still have positive NPV – decrease in household connections, decrease in tariff, decrease in household water consumption, decrease in collection efficiency, increase in O&M costs, increase in lease fee and increase in CRR costs.
- **Small piped water scheme:** The financial analysis shows that the scheme is financially attractive to the private operator and operationally sustainable. The O&M costs can be supported by tariff revenues from Year 0. Even when the CRR costs are considered from Year 0 to 20, the net income to the private operator is positive from Year 0. Further, the sensitivity analysis results show that the scheme can withstand 20% decrease in each of the key revenue drivers and cost drivers and still have positive NPV – decrease in household connections, decrease in tariff, decrease in household water consumption, decrease in collection efficiency, increase in O&M costs, increase in lease fee and increase in CRR costs.
- **Public toilet:** The financial analysis shows that public toilets are financially attractive to the private operator and operationally sustainable. The O&M costs can be supported by tariff revenues from Year 0. When the lease fee to the UP is paid and CRR costs are considered from Year 0 to Year 20, the net income to the private operator is negative in Year 0, but the cumulative net income becomes positive in Year 1. Further, the sensitivity analysis results show that the scheme can withstand 20% decrease in each of the key revenue drivers and cost drivers and still have positive NPV – decrease in use, decrease in user fee, decrease in collection efficiency, increase in O&M costs, increase in lease fee and increase in CRR costs.

C. Fiduciary and Governance

43. **Procurement.** This project is being implemented by two separate entities: DPHE and PKSf. They have established separate PMUs and respective PMUs will be monitored by separate Project Steering Committee. Both the PMUs have prepared separate Project Procurement Strategy for Development (PPSD) with the assistance from the World Bank. The PPSD includes among others: an implementation arrangement; client's capacity in handling procurement; procurement methods, procedures which are fit-for-purpose; thresholds; risk Assessment along with proposed mitigation measures; market analysis; procurement plan, etc. The World Bank has also conducted procurement risk assessment and rated procurement risk as "substantial". AIIB has reviewed PPSD of both implementing agencies and concur to World Bank's assessment including proposed risk mitigation measures.

44. **Financial Management.** Based on the assessment, overall proposed project financial management arrangement is considered adequate provided proposed mitigation measures are addressed. They are: i) Appointment of Financial Management Analyst under ToRs acceptable to IDA and AIIB; ii) An agreement on A Statement of Audit Needs (SAN) with the Office of the Comptroller and Auditor General (OCAG) acceptable to IDA and AIIB; and iii) ToRs for internal audit acceptable to IDA and AIIB.

45. The overall project financial management risk is considered Medium since many of PKSF partner MFIs need to be mobilized and prudently controlled. Overall fiduciary environment also has some weaknesses, including weak data controls in FM system and some internal control deficiencies. However, DPHE and PKSF have significant experiences in managing MDBs supported projects such as IDA's operations and familiar with required procedures and requirements related to financial management. PMUs will be staffed with qualified finance/accounts dedicated to work in this project.

46. PMUs shall prepare annual work plan and budget (AWPB) as per procurement plan and financing agreements. IDA and AIIB will disburse funds to the two Designated Accounts (DAs) of DPHE and PKSF respectively based on quarterly interim unaudited financial reports (IUFs) in an agreed format that will include a six-month funds requirement forecast.

47. A digitized platform will be used for accounting and financial reporting. The project specific accounts shall be maintained as per acceptable accounting practices of DPHE and PKSF. PMUs shall use the Government's general financial rules and treasury rules as the basis for exercising appropriate controls over project transactions wherever applicable. The rules will be supplemented by the project implementation manual (PIM), which will include a detailed description of their components, funds flow, accounting, internal control, reporting, disbursement and oversight arrangements.

48. Expenditures such as salaries, allowances, honorarium, fuel, vehicles, land acquisition for piped water, resettlement expenses, cash subsidies, taxes more than 15 percent will not be eligible under IDA and AIIB financing. Development Project Proposal (DPP) should provide appropriate allocations for these expenditures, if necessary, from the Government sources as co-financing. As per government's decision, PKSF part shall remain out of the DPP mechanism and the details shall be laid out in the PIM.

49. For PKSF-executed components, partner MFIs will prepare funds utilization reports on a monthly basis and send them to the PKSF for consolidation. The Counterpart funding will be separately accounted.

50. PMUs shall submit IUFs for their respective components within 45 days from the end of each fiscal quarter.

51. DPHE will hire a firm of internal auditors to carry out the internal audit function of the project, to be mobilized twice during the project period—the first one six months before the mid-term review and the second one a year before the closure of the project. The firm will be procured under a prior review contract irrespective of value. In case of PKSF, the internal audit department will carry out the internal audit function of the project at least once in a year and submit reports in English to IDA and AIIB within 30 days of finalization.

52. The annual financial statement of DPHE-executed components will be audited by the Foreign Aided Project Audit Directorate as per the mandate of the Office of the Comptroller and Auditor General (OCAG). A Statement of Audit Needs (SAN) will be agreed with the OCAG outlining objectives and the audit scope, and the OCAG will provide an audit opinion on the audited financial statement of the project. The annual project financial statement of PKSf-executed components will be audited by a private audit firm. The audited financial statements of DPHE and PKSf are due to IDA and AIIB within six months of the end of each fiscal year.

53. **Verification process.** MFI loan proceeds and sanitation grants to LEs should only be documented in IDA and AIIB's system after standards verification of built WASH facilities and its expenditures. All proceeds under the project will be transacted using banking channels including mobile banking. PKSf will use utilization reports in preparing necessary financial reports. There would be two verification processes to ensure facilities' compliance with SDG 6 standards: (i) one by representatives from MFI partners or DPHE, which will cover all sanitation facilities provided through the project; and (ii) the other by independent verification consultants (IVCs), which will cover 1 percent of the facilities financed. Both processes will determine the actual disbursement amount to be reimbursed to LEs.

54. **Disbursement.** The project shall follow report-based disbursement mechanism and advances to two Designated Accounts (DAs) shall be deposited in a pooled bank accounts (Convertible Taka Special Account - CONTASA) opened in a commercial bank acceptable to IDA and AIIB. AIIB shall advance an amount to DAs to meet the estimated expenditures for the six months period, as forecasted in the IUFRs. All four disbursement methods—direct payment, reimbursement, designated account, and special commitment—will be available under the project.

55. **Governance and Anti-corruption.** AIIB is committed to preventing fraud and corruption in the projects it finances. For this project, World Bank's Anti-corruption guidelines shall apply which is materially consistent with AIIB's Policy on Prohibited Practices (2016). However, the Bank reserves the right to investigate, directly or indirectly through its agents, any alleged corrupt, fraudulent, collusive, coercive or obstructive practices, and misuse of resources and theft or coercive practices relating to the project and to take necessary measures to prevent and redress any issues in a timely manner, as appropriate.

56. **Institutional Capacity.** The weak institutional capacity at central and local level is a major challenge. The project will provide a series of tailored training opportunities both on technical subjects and soft skills. Such training will be offered to targeted central and local government officials and community health workers, PKSf Officials and MFI staffs over the project implementation period. The project will also establish clear roles and responsibilities between UPs, communities, and the private sector, regarding ownership of the physical assets, tariff setting process, minor and major repair, performance monitoring, and other necessary functions.

D. Environmental and Social

57. **Environmental and Social Policy (including Standards).** The Project will be co-financed with the WB as a lead co-financier, and its environmental and social (ES)

risks and impacts have been assessed in accordance with the WB's Environmental and Social Framework (ESF). To ensure a harmonized approach to addressing the ES risks and impacts of the project, and as permitted under AIIB's Environmental and Social Policy (ESP), the WB's ESF will apply to the Project in lieu of AIIB's ESP. AIIB has reviewed the WB's ESF and is satisfied that: (a) it is consistent with AIIB's Articles of Agreement and materially consistent with the provisions of AIIB's ESP, including the ES Exclusion List and the relevant ES Standards; and (b) the monitoring procedures that are in place are appropriate for the project.

58. **Categorization and ES Instruments.** In general, the project interventions are small-scale in nature, so they are not expected to have any significant or unmitigable ES impacts. The WB has categorized the ES risks of the project as "Moderate" (which is equivalent to Category B if AIIB's ESP were applicable). Specific sites are yet to be determined, thus an Environmental and Social Management Framework (ESMF) has been prepared. The ESMF includes policy, procedures and directives on the assessment of specific environmental and social risks applicable to the Project and provides guidance to mitigate them. In line with the requirement of the WB's ESF, a Stakeholder Engagement Plan (SEP), Labor Management Procedure (LMP) and Environmental and Social Commitment Plan (ESCP) have been developed. The ESMF and LMP reflect requirements in response to COVID-19 and overall ESF implementation and supervision will take the evolving COVID-19 situation into consideration. All instruments have been reviewed by AIIB and found to be satisfactory.

59. **Environmental Aspects.** Key environmental management issues include: (a) the contamination of water, discharge of sludge and untreated sewerage; and (b) the construction related impacts such as air, noise, dust and water management when water pipes and twin pit latrines are built/setup. Appropriate technical design will be adopted for all facilities (water supply, sanitation and handwashing facilities) to prevent environmental risks (leakage/spillage of water, stagnant water, leaching from toilets etc.) at the time of operations. The overall environmental impacts related to the proposed project activities are predictable, site specific, which can be adequately mitigated with the proposed mitigation measures.

60. **Groundwater.** Deep tube wells will be constructed as the source for the water supply for the Project. This will entail the risks of depletion of the deeper aquifers due to the excessive groundwater water withdrawals. Assessment of water resource issues will be undertaken during the pre-feasibility study for each sub-project, followed by a hydro-geological survey at feasibility stage. Also, percolation of sanitary sludge can cause pollution of aquifers, if the toilets are provided with improper provision of sludge management. To mitigate the abovementioned risk, DPHE has already prepared a groundwater mapping, and the location of the deep tube wells will be identified accordingly to ensure low risk of subsidence. The water quality (coliform and selected chemical parameters) for all water facilities will be monitored at regular intervals. Arrangements will be made for chlorination of water, based on assessment of quality risks, before supply in the distribution pipelines at the community level.

61. **Climate Change Risks and Opportunities.** With two-thirds of its land mass less than 5 meters above mean sea level, Bangladesh is very vulnerable to ever-increasing climate change impacts including sea-level rise, droughts, extreme temperature and

storm-induced flooding.¹⁴ The vulnerable population in rural areas is disproportionately affected by the impact of climate change, for example, through floods which inundate up to two-thirds of the country once every three to five years, causing substantial damage to agriculture, housing, infrastructure, and livelihoods.¹⁵

62. The WASH sector in Bangladesh is affected by weather and climate change events,¹⁶ which translated into reduced drinking water availability and quality and also lower performance of sanitation and hygiene services, exacerbating the issues outlined above. It is vital that climate resilience become integral to strategic planning for WASH. Feasibility studies in high climate risk regions under Component 1 will identify water resource availability in view of climate vulnerability and extreme weather conditions. Climate adaptation of elevated platforms for solar pumping systems and climate-resilient latrines, and mitigation measures including reduced usage of greenhouse gas intensive fertilizers have been discussed in paragraph 37.

63. The Project is expected to reduce net GHG emissions compared to the without-project scenario. The water supply activities under Component 1 are estimated to have net emissions of 13,053 tCO₂eq due to an increase in electricity usage compared to a zero-emissions baseline scenario. The latrine improvement activities under Component 2 are expected to see net emissions of -19,826 tCO₂eq due to an expected reduction in anaerobic conditions in latrines. Hence, the total net reduction of carbon emission is estimated to be 6,773 tCO₂eq, which translates into 339 tCO₂eq per year over 20 years.

64. **Social Aspects.** The positive social impacts include: (a) improved health and socio-economic status of women (through design and safety measures); and (b) inclusion (addressing the needs of Indigenous Peoples, and marginalized and vulnerable communities, culturally sensitized design, easing access to information and finance, assistance with repair and maintenance); water supply, sanitation and handwashing facilities will be provided in both communities and in schools to ensure comprehensive public health security. Social risks are also envisaged due to: (a) land use (common/private property, optimizing access through strategic location, resettlement impacts if any); (b) community health and safety; and (c) the type of labor used and associated impacts. If these impacts are well managed, the project is expected to result in better ES outcomes through improved access to 'safely-managed' sanitation

¹⁴ Notre Dame Global Adaptation Initiative (ND-GAIN) Index and Germanwatch's Global Climate Risk Index.

¹⁵ World Bank Climate Change Knowledge Portal and GFDRR (Global Facility for Disaster Reduction and Recovery). 2011. *Bangladesh Risk and Adaptation Country Profile*.

¹⁶ Research to date suggests that sea-level rise due to climate change will exacerbate groundwater salinity problems in coastal regions of Bangladesh (Talukder, Radwanur, Shannon Rutherford, and Cordia Chu. 2015. "Salinization of Drinking Water in the Context of Climate Change and Sea Level Rise: A Public Health Priority for Coastal Bangladesh." *International Journal of Climate Change Impacts and Responses*.). This is of particular concern in a country where groundwater provides 95 percent of all drinking water (Das Gupta, Ashim, Mukand Babel, Xavier Albert, Ole Mark. 2005. "Water Sector of Bangladesh in the Context of Integrated Water Resources Management: A Review." *International Journal of Water Resources Development*.). Studies also suggest that the burden of rising salinity caused by climate change will fall disproportionately on the shoulders of the poor. One study found that in just the southwest coastal region, about 2.5 million poor (including 1.4 million extreme poor) are already suffering shortages of drinking water, scarcity of water for irrigation for dry-season agriculture, and significant changes in the coastal aquatic ecosystems.

facilities, leading to better health. Other potential social risks are related to exclusion from consultation (especially women, elderly, persons with disabilities, Indigenous Peoples, and marginalized and vulnerable communities). Community health and safety risks are also anticipated due to the removal and transportation of fecal sludge. Behavioral Change and Communication will be a critical element for handwashing and maintaining personal hygiene in general and to deter COVID-19 outbreak in the communities.

65. **Gender Aspects.** Gender considerations incorporated in project design include the following: (a) Improving access to water at home significantly reduces the burden on women for carting water for cooking, hand washing, bathing, menstrual hygiene management, and the flushing of latrines; (b) The project places women at home (rather than men in the marketplace) as the primary decision maker on household WASH investments. The provision of a ‘turnkey’ latrine installation service and information sessions within credit groups (Micro Finance Institutions) on WASH loans will improve domestic and environmental sanitation substantially; (c) The design of the toilets will take account of female preferences, such as lockable doors and adequate space for menstrual hygiene; (d) The extension of MFI loans to an estimated 150 women entrepreneurs will help them sell sanitary napkins at the doorsteps, improving the menstrual hygiene especially among adolescent girls. Support for this industry will also help economic empowerment of women; and (e) The project will promote women’s representation and leadership in water management committees at the community level. Women will be encouraged to voice their concerns and ideas about WASH services in regular water management committee meetings. Training on the importance of participating and voicing their opinions in these water management committee meetings will be done through the credit group sessions to maximize dissemination. In terms of staffing, DPHE and PKSf will respectively engage one gender specialist, who will be on board by project effectiveness.

66. **Occupational Health and Safety, Labor and Employment Conditions.** Removal/transportation of septage may cause occupational health and safety concerns if not properly managed. An LMP has been prepared to assess the potential risks and impacts related to the recruitment and management of labor for the implementation of the project activities. The LMP covers the types and numbers of workers, legal frameworks, nature of work assignments, occupational health and safety issues and mitigation measures. Bidding documents and contracts for specific sub-projects will incorporate relevant measures, including sub-project Environmental and Social Management Plan(s) and mitigation measures; requirements to address gender-based violence/sexual exploitation and harassment requirements, and response measures to COVID-19. Given that most of the workers will be from local areas and based on other project conditions, the gender-based violence risk rating for the project is “low”.

67. **Stakeholder Engagement, Consultation and Information Disclosure.** Stakeholder identification and engagement, consultation and communication were carried out. A SEP has been prepared. The Project will set up grassroot-level committees (e.g., water management committees) to support community participation and monitoring. To exercise social distancing, further additional stakeholder consultations will avoid public gatherings (taking into account national restrictions),

including public hearings, workshops and community meetings. Social media, online channels, and chat groups will be used based on the type and category of stakeholders. Traditional channels of communications (TV, newspaper, radio, dedicated phone-lines, and mail) will also be adopted when stakeholders do not have access to online channels or do not use them frequently. ES instruments and the Bengali summaries of ES instruments were disclosed in-country^{17 18} and on the WB's website¹⁹. Links to these instruments will also be disclosed on AIIB's website. Hard copies of the documents will also be made available in all field offices during implementation.

68. **Project Grievance Redress Mechanism.** A Project-level Grievance Redress Mechanism (GRM) will be set up before Project implementation to address grievances and receive feedback from all stakeholders in a timely manner, and will include channels where physical presence is not required to lodge a complaint, given the COVID-19 situation in the country. A basic GRM has been outlined for the workers to report any issues related to workplace safety and other concerns. The GRM will be cognizant of and follow required levels of discretion, and cultural appropriateness, especially when dealing with cases of sexual harassment and Gender-Based Violence.

69. **Independent Accountability Mechanism.** As noted above, WB's ESF will apply to this project instead of AIIB's ESP. Pursuant to AIIB's agreement with WB, AIIB will rely on WB's corporate Grievance Redress Service (GRS), and its independent accountability mechanism, the Inspection Panel, to handle complaints relating to ES issues that may arise under the project. Consequently, in accordance with AIIB's policy on the Project affected People's Mechanism (PPM), submissions to the PPM under this project will not be eligible for consideration by the PPM. Information on WB's corporate GRS is available at <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. Information on WB's Inspection Panel is available at <http://www.inspectionpanel.org>.

70. **Monitoring and Supervision Arrangements.** Both DPHE and PKSF as the two implementing agencies will engage ES specialists to submit half-yearly (every six months) monitoring reports on ES performance of the Project, including stakeholder engagement activities and functioning of the grievance mechanism(s). To the extent permitted by the current travel restrictions, AIIB will join the WB in its missions. ES specialists of WB and AIIB will be working in close coordination and will share information on a periodic basis.

E. Operational Policy on International Relations

71. **International Waterways.** The Bank's Operational Policy on International Relations (OP on IR) applies because the project involves the watersheds of several international waterways, including the Teesta and Dharla rivers (other riparian: Sikkim and West Bengal, India); Bhramaputra, Bhugai and Kushiya rivers (other riparian: Assam, India); Gumti and Feni rivers (other riparian: Tripura, India); and the Singra Nadi

¹⁷ <http://www.dphe.gov.bd/site/view/notices>

¹⁸ http://pkf-bd.org/web/?page_id=8081

¹⁹ <https://projects.worldbank.org/en/projects-operations/document-detail/P169342>

and Surma rivers (other riparian: Meghalaya, India). Pursuant to Section 2.3 of the OP on IR, the Bank may, instead of carrying out its own assessment, rely on the assessment of the co-financier if the Bank is satisfied with the assessment capacity and process of the co-financier, as well as the assessment itself. The WB's OP 7.50 on International Waterways was applied by the WB to this Project. The WB in its assessment determined that: (a) the project investments in water supply involve the replacement of existing hand pumps in rural areas with the new construction of piped water schemes, which would not result in significant change in the overall amount of water consumption; and (b) the investments in sanitation will reduce fecal pollution in the shared watershed. Consequently, the WB applied the exception under paragraph 7(a) of the WB's OP 7.50 to the riparian notification requirement on the basis that the project will not adversely change the quality or quantity of water flows to the other riparians and will not be adversely affected by the other riparians' possible water use. The Bank's OP on IR provides that riparian notification is not required if the project is expected to have minimal or no effect on any of the other riparians. Since the Bank concurs with the WB's assessment, notification under the OP on IR is similarly not required under paragraph 3.3(c)(i) of the OP on IR.

F. Risks and Mitigation Measures

72. The Bank assigns a Medium overall risk rating to the proposed project as summarized in the table below. Also, it is important to highlight here the risks related to the uncertainty surrounding the COVID-19 situation and resulting economic disruptions. Most of the GoB counterpart funding comes from micro-finance loan repayments, and a lower repayment rate that could be caused by a weak economy is already being considered and reflected in the project design. This includes a financing arrangement where IDA and AIIB will advance their support in the initial project years for Sub-component 2.2.a (that is, financing ratios in years 1–2 would be 40.5 percent by IDA, 40.5 percent by the AIIB, and 19.0 percent by the PKSf while those in years 3–5 would be 22.7 percent, 22.7 percent, and 54.7 percent, respectively). This arrangement and the proposed counterpart financing amount will be reviewed at the MTR. Throughout project implementation, the pandemic's impacts on the project will be closely monitored to proactively adjust the design as demand-side challenges emerge.

Table 3: Summary of Risks and Mitigating Measures

Risk Description	Assessment Ratings (High, Medium, Low)	Mitigation Measures
Institutional capacity. The weak institutional capacity at central and local level is a major challenge.	High	To enhance institutional capacity, a series of tailored training workshops, both on technical subjects and soft skills such as leadership and collaboration, will be offered to targeted central and local government officials and community

		health workers over the project implementation period.
Stakeholder. The likelihood of opposition from stakeholders exists, especially from communities where monthly payments for piped water services would be new.	Medium	The general public usually, albeit slowly, develops willingness to pay when communities are mobilized and start appreciating the positive health impacts and the convenience that the piped water schemes would bring. Awareness raising and communication campaign will also be undertaken.
Financial Management. Non-clarity in the channeling and reporting of the MFI loan and sanitation grant proceeds. Some weaknesses in fiduciary environment such as weak data controls in FM system and internal control deficiencies.	Medium	PIM and verification process may support in bringing procedural/process clarity and control. Hiring of dedicated and qualified finance/accounts staff, PIM and project specific internal audit arrangements may mitigate some of these risks.
E&S Inadequate implementation of ES instruments.	Medium	The PMU shall have ES staff responsible for monitoring the implementation of ES instruments. Project review missions will be conducted at least annually to visit the Project sites.
Overall	Medium	

Annex 1: Results Monitoring Framework

Project Objective:	(i) to improve access to 'safely-managed' water supply and sanitation in selected areas of rural Bangladesh; and (ii) to strengthen sector institutional capacity for water and sanitation.								
Indicator Name	Unit of measure	Base-line Data 2020	Cumulative Target Values				End Target 2025	Frequency	Responsibility
			2021	2022	2023	2024			
Project Objective Indicators:									
1. The number of people provided with access to 'safely-managed' water services (gender disaggregated indicator).	Number	0	0	50,000	100,000	300,000	589,680	Quarterly	DPHE
2. The number of people provided with access to 'safely-managed' sanitation services (gender disaggregated indicator).	Number	0	30,000	200,000	1,000,000	2,000,000	3,618,900	Quarterly	DPHE and PKSf
3. # of Upazilas that established and are using the monitoring system.	Number	0	10	20	40	78	78	Quarterly	DPHE
Intermediate Results Indicators:									
4. Amount of MFI financing mobilized (in BDT).	Number	0	0	1,000 million	3,000 million	7,000 million	12,190 million	Quarterly	PKSf
5. The number of handwashing stations built	Number	0	50	1,000	100,000	300,000	763,000	Quarterly	DPHE

Project Objective:	(i) to improve access to 'safely-managed' water supply and sanitation in selected areas of rural Bangladesh; and (ii) to strengthen sector institutional capacity for water and sanitation.								
Indicator Name	Unit of measure	Base-line Data 2020	Cumulative Target Values				End Target 2025	Frequency	Responsibility
			2021	2022	2023	2024			
with running water and soap available.									
6. % of water quality tests that meet national standards.	Percentage	0	0	0	50	80	80	Quarterly	DPHE
7. % of households paying their water tariffs on time (collection efficiency rate).	Percentage	0	0	0	50	70	80	Quarterly	DPHE
8. % of community water management committees whose chair is woman.	Percentage	0	0	10	20	30	30	Quarterly	DPHE
9. % of piped water schemes using solar photovoltaic (PV) as their main energy source.	Percentage	0	0	0	5	10	10	Quarterly	DPHE
10. # of LEs trained on 'safely-managed' WASH infrastructure.	Number	0	0	100	500	1,000	2,300	Quarterly	PKSF
11. The number of policy documents under the National Strategy for Water Supply and Sanitation adopted or endorsed.	Number	0	0	1	2	2	4	Yearly	DPHE

Project Objective:	(i) to improve access to 'safely-managed' water supply and sanitation in selected areas of rural Bangladesh; and (ii) to strengthen sector institutional capacity for water and sanitation.								
Indicator Name	Unit of measure	Base-line Data 2020	Cumulative Target Values				End Target 2025	Frequency	Responsibility
			2021	2022	2023	2024			
12. # of public officials at the local level (Upazilas, UPs, health workers) trained.	Number	0	100	10,000	5,000	10,000	18,600	Quarterly	DPHE

* Annual targets shall be reviewed during implementation mission

Annex 2: Detailed Project Description

1. The following paragraphs provide detailed descriptions of the project design by sub-component.
2. **Component 1: Investments in water supply**. This component aims to enhance access to ‘safely managed’ water services and demonstrate a scalable and sustainable model, enabled by private sector participation. The majority of rural water schemes in Bangladesh are equipped with hand pumps, generally operated by the communities with limited financial and technical capacity to manage maintenance and repair. Among rural dwellers, there is a growing demand for a higher level of service, which resonates with the ‘safely managed’ service level stipulated in SDG 6. In this context, the project seeks to replace existing hand pumps with electric tube well pumps—preferably using solar power²⁰ where feasible—combined with water treatment and nonstop pressurized piped water supply with fully subsidized household connections. The proposed technology calls for skilled labor in terms of maintenance and repair. Global evidence indicates that the community-managed model generally fails on its own and that strong technical backstopping mechanisms,²¹ whether private or public, play a crucial role in ensuring prolonged sustainability of rural water supply schemes. Through this project, the DPHE is committed to evolve past practices and seek to demonstrate new scalable and sustainable delivery models. This will be achieved by introducing water tariffs and water meters and extensive involvement of both the domestic private sector and the UPs (see table 2.1). The DPHE and UPs will be capacitated to supervise and support the private sector.
 - (a) **Sub-component 1.1: Large piped water schemes.** This sub-component will target 78 safe water scarce communities of 300–700 households (1,350–3,150 people) with willingness to pay. The unit cost per schemes is estimated at US\$450,000–500,000. There will be two implementation modalities:
 - (i) For a majority of the schemes, DPHE will procure consultancies to design and supervise the construction of rural water schemes and engage Build & Operate (BO) contractors to build water schemes and operate them for five years. The asset ownership will lie with the UPs, which will be responsible for securing the land for water infrastructure with support from a TA firm. Economies of scale especially in the service provision of rural water schemes are essential. Such efficiencies and proportionate savings will be gained by clustering up to 20 schemes into one service contract.
 - (ii) To pilot Design, Build & Operate (DBO) contracts, one cluster of water schemes under this sub-component will be procured through the DBO delivery model in which a single contractor/operator is appointed to design and build rural water schemes and then operate it for five years. The DBO firm could be a social business enterprise or a consortium of NGOs and contractors. The DBO firm will be responsible for O&M of the cluster of water schemes.

²⁰ Introducing solar power systems might be a feasible option for making the rural water supply more cost-effective because they generally reduce operational costs by up to 50 percent.

²¹ These refer to a third-party support structure that provides daily or periodic technical, operational, and/or managerial support to rural water schemes.

- (b) **Sub-component 1.2: Small piped water schemes.** This sub-component will target about 1,300–1,700 safe water scarce communities with willingness to pay. Around 3,000 small piped water schemes, 1–3 schemes per community, will be invested, each serving 30–40 households (135–180 people). The unit cost per small scheme is estimated at US\$12,500–15,000. According to the government policy, the community will be responsible for contributing an up-front payment of BDT 7,000 (around US\$82) in addition to the monthly water tariffs. To enhance the financial and operational sustainability, expedite project implementation, and fully benefit from economies of scale, DBO contracting will be used in clusters of 20–40 schemes per contract. This may further allow geographically combining the procurement of contractors for activities under Sub-components 1.1 (Large piped water schemes) and 1.2 (Small piped water schemes), which would help the private sector establish a strong local presence. The schemes will be owned by the community, and the UPs will play a monitoring role.

Table 2.1 Comparison of Management Models for Piped Water Schemes

Features	Community Managed (Traditional)	Private Sector Engaged	
		BO (Sub-component 1.1)	DBO (Sub-component 1.2)
Asset ownership	Community	UP	Community
Suggested cluster size	No clustering	Up to 20 schemes	20–40 schemes
Feasibility, design, and community sensitization	TA firm	TA firm	Operator through DBO (a standard design will be provided to the bidders and adjusted based on the local context)
Construction	Private contractor	Operator through BO	
Supervision	TA firm	TA firm	TA firm
Management model	Community management through an LE	BO with service contract for 5 years. Includes training and engagement of LEs	DBO with service contract for 5 years. Includes training and engagement of LEs
Water treatment	LE	Operator	Operator
Guaranties	1-year defect liability period equipment warranties	5-year defect liability period with performance bond 5-year extended equipment warranties	5-year defect liability period with performance bond 5-year extended equipment warranties
Tariff	Flat rate for LE	Volumetric tariff Revenues split between operator (60–70%), reserve account (20–30%), and UP (10%)	Volumetric tariff Revenues split between operator (70–80%) and reserve account (20–30%)
Reporting	Monthly by LE	Monthly by the operator, verified by the UP	Monthly by the operator, verified by the UP

- (c) **Sub-component 1.3: Household loans for water improvements.** The provision of a US\$17.7 million capital loan by the Government to the PKSF will enable targeted 60,000 households to borrow to upgrade their water facilities on the premises, for example, for handwashing and bathing. This may also comprise the electrification of

the existing shallow and deep bores currently fitted with suction or positive displacement hand-pumps. The PKSf will develop certified quality household water and wastewater plumbing standards (to be approved by the DPHE) and train LEs to install facilities to this standard. By the end of the project period, at least 80 percent of the MFIs will be required to issue a water loan policy and allocate some of their own capital to household water loans.

- (d) **Sub-component 1.4: Water supply market development.** This sub-component will facilitate the extension of an estimated US\$0.9 million of loans by MFI partners to an estimated 500 LEs to expand their business and capacity to respond to the increased household demand for piped water facilities. The PKSf will train LEs to install certified water facilities and expand the business models of builders, masons, and hardware shops to include networked water and wastewater systems.
- (e) **Sub-component 1.5: Feasibility studies in high climate risk regions.** This sub-component will support preparation of water supply feasibility studies in severely water scarce areas in southern Bangladesh. Sources for drinking water, technological options, and their financial viability will be examined.
3. **Component 2: Investments in sanitation and hygiene.** This component will focus on providing quality assured, climate-resilient latrines and promoting hygiene, including through provision of handwashing stations. This will be achieved through interventions both in the public and private sectors.
- (a) **Sub-component 2.1: Public sanitation and hygiene facilities.** This sub-component will provide sanitation and hygiene facilities in public places.
- (i) **2.1.a. Public places (US\$7.5 million).** 312 public toilet facilities in high pedestrian traffic locations, such as markets and bus stations, will be constructed.
- (ii) **2.1.b. Community clinics (US\$9.5 million).** About 1,280 community clinics will receive support for renovation or new construction of their WASH facilities, both for patrons and medical purposes. Works will include the delivery of a quality source of piped water for handwashing, sanitation, and hygiene.
- (b) **Sub-component 2.2: Sanitation and hygiene facilities for households.** This sub-component will finance 'safely managed' sanitation and hygiene facilities for households. This will prioritize twin-offset pit latrines, which facilitate the safe management of fecal sludge, and may also include handwashing, bathing, and drainage facilities. The PKSf will develop certified quality latrine facility standards (to be approved by the DPHE), train LEs to install facilities to this standard, and oversee standards verification. Households will receive two different types of support based on their income level:
- (i) **2.2.a. Loans for poor and non-poor households.** The provision of a US\$117.7 million loan by the Government to the PKSf will enable targeted 500,000 households to install twin-offset pit latrines and hygiene facilities. Households will receive subsidies equal to the cost of the second pit as an incentive, and the loan amount for each household will not exceed the costs of sanitation and hygiene facilities less the subsidy. By the end of the project period, at least 80 percent of MFIs will be required to issue a sanitation and hygiene loan policy and allocate capital to household sanitation and hygiene loans.
- (ii) **2.2.b. Grants for the poorest households.** This will provide fully subsidized toilets to about 309,000 poorest households (around 10 percent of the total households in the project locations). The targeting methodology developed for

the WB-financed Income Support Program for the Poorest Project will be used to identify eligible households.

- (c) **Sub-component 2.3: Sanitation and hygiene market development.** This sub-component will facilitate MFI partners to lend an estimated US\$7.2 million to 4,000 LEs to expand their capacity to respond to the increased household demand for latrine facilities. The PKSf will train LEs to install certified sanitation facilities and expand the business models of builders, masons, and hardware shops to offer turnkey sanitation facilities at the households' doorstep. The PKSf is also targeting the extension of loans to an estimated 150 women entrepreneurs to market and sell sanitary napkins for MHM.
 - (d) **Sub-component 2.4: Innovation.** This sub-component will support the development, testing, and localization of innovative WASH technologies and business models, focusing on FSM. It will help pilot and implement the Rural Fecal Sludge Management Framework developed by the Government in 2017. The findings of these pilot will be shared with sector actors and used to develop implementation guidelines.
 - (e) **Sub-component 2.5: Behavioral change communication (BCC) campaign.** The behavioral change strategy will be formulated by blending demand creation and awareness-raising activities and emphasizing health benefits through community health workers and MFI field staff. Different tools and techniques will be used, such as health worker visits to households, target group sessions, and mass and social media. This sub-component will also include support for training health workers and staff from the MoHFW, community clinics, and MFI and the identification and supervision of poorest household targeting.
4. **Component 3: Institutional strengthening.** This component will support strengthening of institutions to help implement the NSWSS, which is in the process of government approval.
- (a) **Sub-component 3.1: Strengthening of policies and regulatory framework.** This sub-component supports drafting of national policy documents that are critical in implementing the NSWSS. Policy documents to be supported are the following: (i) implementation guidelines (that is, the SDG 6 Action Plan) for the NSWSS; (ii) a detailed and dated road map for WASH regulation and monitoring; (iii) an overall 10-year national WASH program and its investment plan; and (iv) an updated Government Circular on the Water and Sanitation Committees, originally issued by the LGD under the MoLGRD&C in 2007.
 - (b) **Sub-component 3.2: Capacity building.** This sub-component will design and deliver a series of multi-year training programs to targeted central and local government officials, who would be critical in implementing the NSWSS.
 - (i) **Training.** Multi-year training programs will focus on enhancing central and local government officials' understanding and hands-on technical and soft skills that are required to implement the NSWSS. Attendees will be carefully targeted to ensure that their learning needs match with the training objectives of specific workshops offered. The workshops will cover a wide range of topics, such as investment planning, procurement, supervision, asset management, energy efficiency, tariff setting, sustainability, climate resiliency, water quality monitoring,

BCC, citizen engagement, M&E, leadership and change management,²² multisectoral approach, collaboration, and information technology (IT) skills. Overseas and in-country study tours will be part of training as well.

- (ii) **Provision of IT equipment.** IT hardware/software investments will be made to enhance efficiency of sector institutions. An IT infrastructure strategy and Procurement Plan will be drafted, which will support the DPHE and UPs throughout the WASH investment cycle, including investment planning, procurement, supervision, asset management, tariff setting, water quality monitoring, BCC, citizen engagement, M&E, multisectoral approach, and collaboration.

5. **Component 4: Project implementation and management.** This component is to support the key project management activities necessary for DPHE and PKSF to implement the proposed project activities in compliance with fiduciary procedures and the ESF.

- (a) **Sub-component 4.1: DPHE project management.** This sub-component will include the establishment of a WASH PMU within the DPHE, including the engagement of seven staff (FM, engineering, hydrogeologist, environmental, social, procurement, and M&E specialists) and resources for management of the project; a total of 18 district coordinators with resources for project monitoring; and resources for improving water quality monitoring by DPHE laboratories in the project areas. Firms and/or individual consultants will be engaged for assignments that include the development of web- and mobile-based monitoring software and dashboard (including the training of PMU, TA firms, contractors, and LEs); the design/supervision of piped water schemes and public toilets; the development of water quality laboratory monitoring systems; and an impact evaluation examining correlation between 'safely managed' WASH investments and human capital outcomes.
- (b) **Subcomponent 4.2: PKSF project management.** This sub-component will include the establishment of a WASH PMU within the PKSF including the engagement of estimated ten staff (engineering, environmental, social, procurement, gender, and research/documentation and management information system specialists) for project implementation; deployment of a project coordinator; a deputy project coordinator and two program managers for audit and finance, and six IVCs with resources for field visits, verification, and mobile monitoring. Firms and/or individual consultants will be engaged for assignments that include the development of web- and mobile-based monitoring software and dashboard (including the training of PMU, MFIs, and IVCs); the detailed design of the household water and sanitation facility standards (in compliance with SDG 6.1 and 6.2); the development of BCC materials (including the training of PMU and MFI staff, LEs, and UPs); the development of baseline and end-line monitoring of 'safely managed' WASH status; periodic review meetings and experience the sharing of good practices; and the undertaking of annual financial audits.

6. **Component 5: COVID-19 emergency response.** In line with the Government's

²² The field-level Leadership Development Initiative will be considered.

WASH strategic paper on the COVID-19 outbreak,²³ this component will provide quick, just-in-time WASH services that are an essential part of preventing disease and protecting human health during the current COVID-19 pandemic. Support will include providing pandemic hotspots in Bangladesh with: (a) soap, alcohol-based hand rubs, handwashing stations/devices (fixed and portable) with running water, proper drainage, and sanitation facilities; (b) quality water access or delivery points,²⁴ using water quality testing, disinfection, compact water treatment plants, water tankers, bottled water, and water kiosks; and (c) emergency operational supplies, such as personal protective equipment, chemicals, electricity, spare parts, consultant costs, for water supply and sanitation service providers to ensure disaster preparedness and continuity of service delivery. Requests from temporary and permanent health care facilities would be prioritized to make them compliant with the guidelines for infection prevention, control, and management in health facilities provided by the MoHFW. Requests from quarantine sites, slums, and public places such as markets, transport stations, schools, and community gathering points would be responded with urgency as well. In addition, the ongoing nationwide BCC campaign on COVID-19 prevention will be expanded to include proper WASH messages.

7. **Component 6: Contingent emergency response component (CERC).** A provisional zero amount component is included, which will allow for rapid reallocation of loan proceeds from other project components during an emergency, under streamlined procurement and disbursement procedures. This component may also serve as a conduit for additional funds to be channeled to the project in such circumstances. The conditions for accessing funds under this component will be described in the PIM.

8. **Project Locations.** This project will be implemented in 78 Upazilas in 18 districts, which are chosen from the four poor divisions (Mymensingh, Rangpur, Chottogram and Sylhet). The project will converge with the two ongoing WB-financed projects, namely the Health Sector Support Project (HSSP) and the Income Support Program for the Poorest Project (ISPPP), seeking to leverage the human capital interventions in WASH, health, and nutrition. Location selections were also made based on levels of water availability and quality, WASH coverage, and quality of MFI services. The Project Upazilas are shown in the following table.

Sl. No.	Upazila	District	Division	Converging Project
1	Jamalpur Sadar	Jamalpur	Mymensingh	ISPPP
2	Madarganj	Jamalpur	Mymensingh	ISPPP
3	Melanda	Jamalpur	Mymensingh	ISPPP
4	Sarishabari	Jamalpur	Mymensingh	ISPPP

²³ Bangladesh Strategic Paper to Response Water, Sanitation and Hygiene (WASH) issues during the COVID-19 Outbreak. April 2020.

²⁴ This is relevant to the COVID-19 situation, because the need for water collection often makes social distancing and staying at home difficult, which are the imperative measures for flattening the COVID-19 curve. For instance, roughly 30 million people in Bangladesh must walk about 30 minutes to collect water for their household every day, especially in Chittagong Hill Tracks, saline-prone coastal areas, Hoar areas (a wetland ecosystem in the north eastern part of Bangladesh), and Char areas. Urban slums are also at high risk of transmission, partly due to accessing water supply services where more than 20 people often get water from one tap stand at a time, making social distancing impossible. In over 90 percent of the households in Bangladesh, women and girls are the primary collectors of water and hence disproportionately more vulnerable. Therefore, the expansion of water supply services to reduce the water collection time is essential in addressing the COVID-19 pandemic.

Sl. No.	Upazila	District	Division	Converging Project
5	Bhaluka	Mymensingh	Mymensingh	ISPPP
6	Fulpur	Mymensingh	Mymensingh	ISPPP
7	Haluaghat	Mymensingh	Mymensingh	ISPPP
8	Gouripur	Mymensingh	Mymensingh	ISPPP
9	Muktagacha	Mymensingh	Mymensingh	ISPPP
10	Trishal	Mymensingh	Mymensingh	ISPPP
11	Nalitabari	Sherpur	Mymensingh	ISPPP
12	Sherpur Sadar	Sherpur	Mymensingh	ISPPP
13	Sreebardi	Sherpur	Mymensingh	ISPPP
14	Gaibandha Sadar	Gaibandha	Rangpur	ISPPP
15	Gobindaganj	Gaibandha	Rangpur	ISPPP
16	Palash bari	Gaibandha	Rangpur	ISPPP
17	Sagatha	Gaibandha	Rangpur	ISPPP
18	Sadullapur	Gaibandha	Rangpur	ISPPP
19	Fulchari	Gaibandha	Rangpur	ISPPP
20	Kurigram Sadar	Kurigram	Rangpur	ISPPP
21	Chilmari	Kurigram	Rangpur	ISPPP
22	Roumari	Kurigram	Rangpur	ISPPP
23	Rajibpur	Kurigram	Rangpur	ISPPP
24	Rajarhat	Kurigram	Rangpur	ISPPP
25	Fulbari	Kurigram	Rangpur	ISPPP
26	Ulipur	Kurigram	Rangpur	ISPPP
27	Bhurangamari	Kurigram	Rangpur	ISPPP
28	Nageswari	Kurigram	Rangpur	ISPPP
29	Hatibandha	Lalmoinirhat	Rangpur	ISPPP
30	Jaldhaka	Nilphamari	Rangpur	ISPPP
31	Akhaura	Brahmanbaria	Chottogram	HSSP
32	Nabinagar	Brahmanbaria	Chottogram	HSSP
33	Sadar	Brahmanbaria	Chottogram	HSSP
34	Bancharampur	Brahmanbaria	Chottogram	HSSP
35	Chandpur Sadar	Chandpur	Chottogram	HSSP
36	Haimchar	Chandpur	Chottogram	HSSP
37	Matlab Dakshin	Chandpur	Chottogram	HSSP
38	Matlab Uttar	Chandpur	Chottogram	HSSP
39	Faridgonj	Chandpur	Chottogram	HSSP
40	Kachua	Chandpur	Chottogram	HSSP
41	Hajigonj	Chandpur	Chottogram	HSSP
42	Shahrasti	Chandpur	Chottogram	HSSP
43	Boalkhali	Chottogram	Chottogram	HSSP
44	Mirersarai	Chottogram	Chottogram	HSSP
45	Patiya	Chottogram	Chottogram	HSSP
46	Sitakunda	Chottogram	Chottogram	HSSP
47	Bashkhali	Chottogram	Chottogram	HSSP
48	Sandwip	Chottogram	Chottogram	HSSP
49	Chandanaish	Chottogram	Chottogram	HSSP
50	Cumilla Sadar South	Cumilla	Chottogram	HSSP
51	Daudkandi	Cumilla	Chottogram	HSSP
52	Nangalkot	Cumilla	Chottogram	HSSP
53	Lalmai	Cumilla	Chottogram	HSSP
54	Laksam	Cumilla	Chottogram	HSSP
55	Monoharganj	Cumilla	Chottogram	HSSP
56	Titas	Cumilla	Chottogram	HSSP
57	Homna	Cumilla	Chottogram	HSSP

Sl. No.	Upazila	District	Division	Converging Project
58	Chagalnaiya	Feni	Chottogram	HSSP
59	Dagonbhuya	Feni	Chottogram	HSSP
60	Feni Sadar	Feni	Chottogram	HSSP
61	Ramganj	Laksmipur	Chottogram	HSSP
62	Laksmiur Sadar	Laksmipur	Chottogram	HSSP
63	Raipur	Laksmipur	Chottogram	HSSP
64	Companyganj	Noakhali	Chottogram	HSSP
65	Kabirhat	Noakhali	Chottogram	HSSP
66	Subarnachar	Noakhali	Chottogram	HSSP
67	Golapganj	Sylhet	Sylhet	HSSP
68	Zakiganj	Sylhet	Sylhet	HSSP
69	Kanaighat	Sylhet	Sylhet	HSSP
70	Madhabpur	Habiganj	Sylhet	HSSP
71	Baniachang	Habiganj	Sylhet	HSSP
72	Chunarughat	Habiganj	Sylhet	HSSP
73	Daksin Sunamganj	Sunamganj	Sylhet	HSSP
74	Jagannathpur	Sunamganj	Sylhet	HSSP
75	Dharmapasha	Sunamganj	Sylhet	HSSP
76	Tahirpur	Sunamganj	Sylhet	HSSP
77	Rajnagar	Moulvibazar	Sylhet	HSSP
78	Moulavibazar Sadar	Moulvibazar	Sylhet	HSSP
Total	78	18	4	2

Annex 3: Economic and Financial Analysis

A. Economic Analysis

1. Methodology and approach: A cost-benefit analysis was carried out to assess the economic viability of the Project comparing “with-” and “without-project” scenarios. The Economic Internal Rate of Return (EIRR) and Economic Net Present Value (ENPV) of the Project was estimated based on a discounted cashflow analysis considering costs and benefits. Sensitivity Analysis was performed taking into consideration: (i) increased capital costs; (ii) increased O&M costs; (iii) decreased economic benefits; (iv) decrease in health benefits related to BCC; (v) an implementation start delay of 2 year and (vi) an implementation prolongation of 2 years.

2. Assumptions: The project will be implemented in 78 Upazilas, which have a total population of about 12 million. Components 1 and 2 (that is, the interventions in water supply and sanitation) comprise almost 92 percent of the investment and thus the EA mainly focuses on these two components. The other three components (that is, sector strengthening, project implementation and management, and COVID-19 emergency response) may deliver significant economic benefits but are not included in the analysis. To be conservative and avoid potential double counting, the EA excluded health benefits likely to ensue from water interventions, and the health benefits from the BCC campaign were considered only for 42 percent of the total population, who would not receive any infrastructure improvement through the project. The key assumptions used in the EA are shown in the table below:

Description	Estimates
Estimated population in project areas (2020)	12,462,876
Population growth rate (World Bank)	-6%
Average household size in rural areas (Project Beneficiary Survey)	4.5
Percentage of ultra poor (HEIS 2016)	13%
Number of toilets provisioned as grants	304,200
Number of toilets provisioned through loans	1,000,000
Number of public toilets provisioned for growth centers and community clinics	1,592
Number of large piped water schemes	78
Number of small piped water schemes	2,964
Price of carbon emission US\$ per tCO ₂ eq (lower bound)	40
Price of carbon emission US\$ per tCO ₂ eq (upper bound)	80
Estimated project life (years)	20
Opportunity cost of capital	10%

Note: HEIS = Household Expenditure and Income Survey

The economic NPV and IRR for the project were calculated using the stream of financial costs, adjusted to exclude applicable value added tax and consider shadow price of rural labor based on an estimated conversion factor of 0.96. The domestic price numeraire was used in the analysis. All prices are expressed in constant values of the base year 2020. To keep the analysis conservative, the without-project costs—the O&M costs of tube-wells and unimproved toilets currently being used in rural areas, which are very low in any case—and with-project water tariff payments were not considered.

3. Project benefits: The impact of WASH interventions on welfare is multifaceted, some being easily identifiable and quantifiable (for example, avoided treatment costs and time saved) and others being more intangible and difficult to measure (for example, living standards, well-being, and environmental quality). The benefits (or costs) of WASH interventions included in the analysis are the following:

- (a) Treatment cost savings and increased working days stemming from the averted incidents of diarrheal diseases among the targeted beneficiaries of sanitation investments. Using the results from a meta-analysis, it was assumed that improvements in sanitation would reduce diarrheal incidents by 37 percent.
- (b) Costs of time saved arising from on-premise piped water supply.
- (c) Treatment cost savings and increased working days stemming from the averted incidents of diarrheal diseases among the targeted beneficiaries of BCC campaigns, excluding the beneficiaries already counted for the water supply and sanitation investments. Using the results from the same meta-analysis cited above, it was assumed that improvements in hygiene due to BCC campaigns would reduce diarrheal incidents by 32 percent.
- (d) The environmental benefits (or costs) arising from GHG emission. The price of carbon emission is assumed to be US\$40–US\$80. The project is expected to reduce the net GHG emission compared to the without-project scenario. The total net reduction of carbon emission is estimated to be 6,773 tCO₂eq, which translates into 339 tCO₂eq per year over 20 years.

4. EA Results and Sensitivity Analysis: The Economic Internal Rate of Return (EIRR) was estimated at 33 percent and Economic Net Present Value (ENPV) at USD514 million based on a 10 percent discount rate. The base case was stress tested for with respect to a 20 percent increase in capital cost, a 20 percent increase in O&M cost, a 20 percent decrease in economic benefits, a 20 percent decrease in health benefits related to BCC, an implementation start delay of 2 year and an implementation prolongation of 2 years. The EIRR remains above the economic opportunity cost of capital (EOCC) of 10 percent for all the scenarios. The results show that the project will produce net economic benefits even under potential high-risk scenarios.

Scenario	Change	NPV (USD million)	IRR
Base case		514	33%
Base case, using higher bound carbon price		514	33%
Increase in capital costs	20%	462	28%
Increase in O&M costs	20%	511	33%
Decrease in economic benefits	20%	357	27%

Decrease in health benefits related to BCC	20%	474	31%
Implementation start delay	2 years	354	33%
Implementation prolongation	2 years	436	34%

B. Financial Analysis

1. Methodology and approach: The piped water schemes and public toilets are proposed to be implemented with 100 percent subsidized CAPEX, so the financial analysis focuses on their operational sustainability on a cash basis and ability to recover CRR costs during their economic life (that is, 20 years). Tax implications for the private operator are not considered in the analysis. The IRR is not calculated, because CAPEX is 100 percent subsidized.

A. Large Piped Water Schemes

(i) Assumptions. The key assumptions are as follows:

Sl. No.	Description	Value
1	Annual increase of tariff	6.5%
2	Annual increase of O&M cost	6.5%
3	Tariff collection efficiency (Year 3–20)	90%
4	Total connections at the beginning of Year 1	350
5	Total connections at the beginning of Year 2	500
6	Total connections at the beginning of Year 3	600
7	Total connections at the beginning of Year 4 and onward	700
8	Lease fee as percentage of tariff revenues	10%
9	CRR costs as percentage of tariff revenues	20%
10	Scrap value after economic life (year)	0
11	Tariff per m ³ water consumed in Year 0 (BDT)	16.67
12	Monthly water consumption per household (m ³)	12.00

Monthly O&M Costs of a Large Piped Water Scheme are as follows:

Sl. No.	Description	Amount (BDT)
1	Staff salary (1 pump operator and 1 plumber)	16,000
2	Electricity cost	36,000
3	Routine maintenance including cleaning	2,000
4	Minor repair and replacement of filter media	6,000
5	Water testing	500
6	Chemical cost for treatment (chlorination)	2,500
7	Miscellaneous (for example, stationery, meetings, mobile, and transport)	1,000
Total		64,000

(ii) Results: The financial analysis shows that the scheme is financially attractive to the private operator and operationally sustainable. The O&M costs can be

supported by tariff revenues from Year 0. When the lease fee to the UP is paid and CRR costs are considered from Year 0 to 20, the net income to the private operator becomes negative during the first and second year of operation, but the cumulative net income becomes positive in Year 3. In other words, the scheme will break even in operational terms in Year 3. Using the discount rate of 16.5 percent to cover the 10 percent opportunity cost of capital and 6.5 percent inflation, the NPV of the private operator's net income after O&M costs, CRR costs, and the lease fee is BDT 1,585,553. This may be boosted when the BO or DBO contracts are clustered and staff are deployed across the clustered schemes. The yearly net income working is given below:

Year	0	1	2	3	4	5	10	15	20
Annual tariff revenues	86,400	672,000	1,086,300	1,469,956	1,826,420	1,945,137	2,665,006	3,651,290	5,002,583
Sub-total	86,400	672,000	1,086,300	1,469,956	1,826,420	1,945,137	2,665,006	3,651,290	5,002,583
O&M costs	124,800	537,600	654,336	783,976	927,705	988,006	1,353,654	1,854,623	2,540,995
Operating income	(38,400)	134,400	431,964	685,979	898,715	957,131	1,311,352	1,796,666	2,461,589
Lease fee to UP	8,640	67,200	108,630	146,996	182,642	194,514	266,501	365,129	500,258
CRR	17,280	134,400	217,260	293,991	365,284	389,027	533,001	730,258	1,000,517
Net income	(64,320)	(67,200)	106,074	244,993	350,789	373,590	511,850	701,279	960,814
Cumulative net income	(64,320)	(131,520)	(25,446)	219,547	570,335	943,925	3,209,272	6,312,994	10,565,361

- (iii) **Sensitivity analysis:** The large piped water scheme is deemed financially robust against various risk scenarios. The results from the sensitivity analysis show that the scheme can withstand 20 percent decrease in one of key assumptions and still have positive NPVs. The scheme's operational sustainability is highly dependent on house connections, tariffs, household water consumption, and collection efficiency, as decrease in each by 20 percent makes the NPV to fall sharply as shown in the table below:

Scenario	Change (%)	NPV (BDT)
Base case (operator's net income)	0	1,585,553
Decrease in house connection	20	235,072
Decrease in tariffs (BDT/m ³)	20	235,072
Decrease in household water consumption	20	235,072
Decrease in collection efficiency	20	235,072
Increase in O&M costs	20	558,023
Increase in lease fee	20	1,417,657
Increase in CRR costs	20	1,220,560

B. Small Piped Water Schemes

(i) **Assumptions:** The key assumptions are as follows:

Sl. No.	Description	Value
1	Annual increase of tariff	6.5%
2	Annual increase of O&M cost	6.5%
3	Tariff collection efficiency (Year 3–20)	90%
4	Total connection at the beginning of Year 1	35
5	Total connection at the beginning of Year 2 and onward	40
6	Lease fee as percentage of tariff revenues	0%
7	CRR costs as percentage of tariff revenues	25%
8	Scrap value after economic life (year)	0
9	Tariff per m ³ water consumed in Year 0 (BDT)	16.67
10	Monthly water consumption per household (m ³)	9.00

Monthly O&M Costs of a Small Piped Water Scheme is as follows:

Sl. No.	Description	Amount
1	Remuneration of scheme operator/LE	500
2	Electricity cost	900
3	Routine maintenance including cleaning, repairing, and replacement	500
4	Water testing	200
5	Chemical cost for treatment (chlorination)	200
	Total	2,300

(ii) **Results:** The financial analysis shows that the scheme is financially attractive to the private operator and operationally sustainable. The O&M costs can be supported by tariff revenues from Year 0. Even when the CRR costs are considered from Year 0 to 20, the net income to the private operator is positive from Year 0. In other words, the scheme will break even in operational terms in Year 0. Using the discount rate of 16.5 percent to cover the 10 percent opportunity cost of capital and 6.5 percent inflation, the NPV of the private operator's net income after O&M and CRR costs is BDT 101,174. This may be boosted when the DBO contracts are clustered and staff are deployed across the clustered schemes. The yearly net income working is given below:

Year	0	1	2	3	4	5	10	15	20
Annual tariff revenues	10,125	50,400	65,178	73,498	78,275	83,363	114,215	156,484	214,396
Sub-total	10,125	50,400	65,178	73,498	78,275	83,363	114,215	156,484	214,396
O&M costs	6,300	30,240	35,784	38,110	40,587	43,225	59,222	81,140	111,169
Operating income	3,825	20,160	29,394	35,388	37,688	40,138	54,992	75,344	103,228
CRR	2,531	12,600	16,295	18,374	19,569	20,841	28,554	39,121	53,599
Net income	1,294	7,560	13,100	17,013	18,119	19,297	26,439	36,223	49,629
Cumulative net income	1,294	8,854	21,953	38,967	57,086	76,383	193,395	353,711	573,358

- (iii) **Sensitivity analysis:** The small piped water scheme is deemed financially robust against various risk scenarios. The results from the sensitivity analysis show that the scheme can withstand 20 percent decrease in one of the key assumptions and still have positive NPVs. The scheme's operational sustainability is highly dependent on house connections, tariffs, household water consumption, and collection efficiency, as decrease in each by 20 percent makes the NPV fall sharply as shown in the table below:

Sl. No.	Scenario	Change (%)	NPV (BDT)
1	Base case (operator's net income)	0	101,174
2	Decrease in house connection	20	32,254
3	Decrease in tariffs (BDT/m ³)	20	32,254
4	Decrease in household water consumption	20	32,254
5	Decrease in collection efficiency	20	32,254
6	Increase in O&M costs	20	52,489
7	Increase in CRR costs	20	78,201

C. Public Toilet

- (i) **Assumptions.** The key assumptions are as follows:

Sl. No.	Description	Value
1	Annual increase of tariff	6.5%
2	Annual increase of O&M costs	6.5%
3	Tariff collection efficiency in Year 3 and onward	90%
4	Lease fee as percentage of revenue	10%
5	CRR costs as percentage of revenue	20%
6	Scrap value after economic life (year)	0
7	Number of latrine and urinal users in Year 3 and onward	200
8	Number of bathing service users Year 3 and onward	25
9	Fee per use of latrine and urinal in Year 0 (BDT)	5
10	Fee per use of bathing/washing service in Year 0 (BDT)	10

Monthly O&M costs of a public toilet is as follows:

Sl. No.	Description	Amount
1	Staff salary (1 caretaker and 1 cleaner)	14,000
2	Electricity cost	1,680
3	Routine maintenance including cleaning and minor repairing	1,000
4	Desludging (once after 3 years)	500

5	Miscellaneous	500
	Total	17,680

- (ii) **Results:** The financial analysis shows that public toilets are financially attractive to the private operator and operationally sustainable. The O&M costs can be supported by tariff revenues from Year 0. When the lease fee to the UP is paid and CRR costs are considered from Year 0 to Year 20, the net income to the private operator is negative in Year 0, but the cumulative net income becomes positive in Year 1. In other words, a public toilet will break even in Year 1 in operational terms. Using the discount rate of 16.5 percent to cover the 10 percent opportunity cost of capital and 6.5 percent inflation, the NPV of the private operator's net income after

Year	0	1	2	3	4	5	10	15	20
Revenues from latrine and urinal use	42,188	216,000	285,154	367,489	391,376	416,815	571,073	782,419	1,071,982
Revenues from bathing service use	6,750	43,200	65,178	91,872	97,844	104,204	142,768	195,605	267,996
Sub-total	48,938	259,200	350,332	459,361	489,220	521,019	713,841	978,024	1,339,978
O&M costs	39,780	169,728	203,355	240,637	256,279	272,937	373,947	512,340	701,950
Operating income	9,158	89,472	146,976	218,724	232,941	248,082	339,894	465,684	638,028
Lease fee to UP	4,894	25,920	35,033	45,936	48,922	52,102	71,384	97,802	133,998
CRR	9,788	51,840	70,066	91,872	97,844	104,204	142,768	195,605	267,996
Net income	(5,524)	11,712	41,877	80,916	86,175	91,777	125,742	172,277	236,035
Cumulative net income	(5,524)	6,188	48,065	128,981	215,156	306,932	863,440	1,625,904	2,670,546

O&M costs, CRR costs, and the lease fee is BDT 440,381. This may be boosted when the operation contracts are clustered, and staff are deployed across a cluster of public toilets. The yearly net income working is given below:

- (iii) **Sensitivity analysis:** The public toilets are deemed financially robust against various risk scenarios. The results from the sensitivity analysis show that they can withstand 20 percent decrease in one of the key assumptions and still have positive NPVs. The public toilet's operational sustainability is highly dependent on the number of users, user fees, and collection efficiency, as decrease in each by 20 percent makes the NPV fall sharply as shown in the table below:

Sl. No.	Scenario	Change (%)	NPV (BDT)
1	Base case (operator's net income)	0	440,381
2	Decrease in use	20	50,875
3	Decrease in user fees	20	50,875
4	Decrease in collection efficiency	20	50,875
5	Increase in O&M costs	20	138,952
6	Increase in lease fee	20	384,738
7	Increase in CRR costs	20	329,094

Annex 4: Sovereign Credit Fact Sheet

A. Recent Economic Development

1. Bangladesh is a lower-middle income country with GDP per capita at USD 1,698 and a population of 161.2 million.²⁵ Bangladesh's economy has performed exceedingly well with growth steadily increasing from 7.2 percent in 2016 to 8.0 percent in 2018. Growth in 2019 is also estimated to have been healthy at 7.9 percent. It is, however, expected to decline sharply in 2020 as COVID-19 crisis has affected remittances and garment exports. The growth acceleration in 2019 has been driven by higher public investment on large infrastructure projects, strong private consumption buoyed by remittances and exports growing faster than imports. Manufacturing growth has been robust due to strong performance of the readymade garments sector.

2. In 2019, inflation has remained broadly stable around the central bank's target of 5.5 percent. The increase in non-food inflation due to adjustment in natural gas price and currency depreciation has been offset by a decline in food inflation due to a good harvest and lower global food prices. The central bank kept the policy rates unchanged through 2019 as inflation remained stable. Domestic credit has been healthy during most of 2019, although it was mostly driven by government borrowing as growth in private credit moderated.

3. Slower than expected revenue collection and higher spending pushed the overall deficit to 5.2 percent of GDP in 2019, crossing the ceiling of 5.0 percent for the first time in a decade. Both current and capital spending grew at a rapid space, reflecting election related spending and development expenditure. The government continues to prefer concessional external borrowing, especially to finance infrastructure projects.²⁶ External public debt, at 15 percent of GDP, remains favorable.

4. The current account deficit after widening significantly to 2.6 percent of GDP in 2018 is estimated to be 2.7 percent of GDP in 2019. Exports of readymade garments accelerated reflecting strong demand from newer markets like Australia, Canada and China. Import growth after remaining strong in the first half slowed down during the second half of 2019, due to lower demand for garment intermediates and capital imports and a sharp decline in rice imports. Remittances grew strongly, buoyed by depreciation of the currency and measures taken to facilitate transfers through official channels. The ratio of external debt to GDP remains favorable at below 20 percent of GDP, with public and publicly guaranteed external debt being around 15 percent of GDP.

B. Economic Indicators

Selected Macroeconomic Indicators - Bangladesh (FY2016-FY2021)

²⁵ The income group classification for fiscal year 2019 is based on World Bank criteria, details seen: <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519>; Population data use World Bank 2018 data.

²⁶ ADB Asian Development Outlook 2019 Strengthening Disaster Resilience, April 2019

Economic Indicators	FY 2016	FY 2017	FY 2018	FY 2019*	FY 2020*	FY 2021*
Real GDP growth**	7.2	7.6	8.0	7.9	2.0	9.5
CPI Inflation (% change, average)**	5.7	5.6	5.6	5.7	5.5	5.6
Current account balance (% of GDP)**	0.6	-2.1	-2.6	-2.7	-2.2	-0.8
Central government overall balance (% of GDP)**	-3.4	-3.3	-4.6	-5.2	-6.4	-6.0
Nominal gross public debt (% of GDP)	33.3	32.6	34.0	34.9	35.5	36.1
Public gross financing needs (% of GDP)	5.0	8.2	7.9	9.0	8.2	10.6
External debt (% of GDP)	18.5	18.0	20.1	18.6	18.2	17.9
Gross external financing need (% of GDP)	1.5	3.6	7.0	7.0	5.2	4.6
Net Foreign Direct Investment Inflow (% of GDP)	0.6	0.7	0.6	0.6	0.6	0.6
Gross official reserves (months of imports)	7.2	7.0	6.2	5.6	5.1	4.9
Broad money (M2, % change)	16.3	10.9	9.2	12.7	13.9	--
Exchange rate (BDT/USD, EOP) ***	78.4	80.6	83.7	84.9	84.9	

Note: * denotes projected figures.

** denotes data based on calendar year. All other data is based on fiscal year, which begins on 1 July and ends on 30 June. FY2019 runs from July 2018 to June 2019.

** FX data from Thomson Reuters, 2020 FX rate as of April 17, 2020

EOP: end of the period

Source: IMF's Country Report No. 19/299, September 2019 and IMF's World Economic Outlook Database, April 2020.

C. Economic Outlook and Risks

5. Bangladesh's growth in 2020 is projected to decline sharply to 2.0 percent, due to disruptions related to ongoing COVID-19 pandemic. The national lockdown will dent private consumption as people working in the informal sector face a loss of earnings.²⁷ This is likely to be exacerbated by disruption in remittance flows as migrants lose work in foreign countries or find it difficult to remit as financial agencies are closed. Private investment, which has been weak in recent years is expected to dampen further as uncertainties related to COVID-19 persist. Industrial output is also likely to decline due to lockdown, shortage of intermediate imported inputs and unavailability of workers. Public investment is also likely to witness some stagnation as government focuses on supporting the vulnerable sections of the economy. Exports of readymade garments, which account for 80 percent of overall merchandise exports is expected to fall significantly as some of the major export destinations enter into a lockdown and curtail discretionary spending. However, growth is expected to rebound strongly in 2021 as economic activity normalizes, helped by policy support.²⁸

6. Inflation is expected to remain around the central bank target of 5.5 percent in FY2020. Part of the decline in aggregate demand on account of reduction in disposable

²⁷ On March 23rd, the government declared a general holiday from March 26th to April 4th, which ultimately been extended till May 30th.

²⁸ According to IMF's World Economic Outlook 2020, the baseline scenario assumes that the pandemic fades in the second half of 2020 and containment efforts can be gradually unwound.

income will be boosted by the fiscal stimulus announced by the government. Expansionary monetary policy is also expected to push prices up. The banking sector stress could go up as weak economic activity pushes up non-performing loans thereby constraining lending.

7. With the government increasing spending to counter the impact of COVID-19 pandemic, the fiscal deficit is expected to increase. Recurrent expenditure is expected to grow significantly as the government rolls out various relief measures including scaling up of social protection schemes and supporting payroll of manufacturing sector. A downturn in economic activity will also adversely impact tax collections. Public debt can inch up a bit as a result of higher deficit. Bangladesh has a favorable debt profile as majority of the public debt is denominated in domestic currency and held by residents. External public debt is also expected to remain around current levels. Overall, Bangladesh exhibits a low risk of debt distress.

8. Current account deficit is expected to moderate slightly in 2020. Much of the decline in the deficit will be driven by lower oil prices and lower demand for capital imports as investment weakens. The decline in imports is expected to offset the reduction in remittances and slowing of exports, especially garment exports.

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