



# Report and Recommendation of the President to the Board of Directors

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Project Number: 36297  
September 2006

Proposed Loan  
People's Republic of Bangladesh: Secondary Towns  
Water Supply and Sanitation Sector Project

Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 19 September 2006)

Currency Unit	–	taka (Tk)
Tk1.00	=	\$0.0151
\$1.00	=	Tk66.06

## ABBREVIATIONS

ADB	–	Asian Development Bank
CBO	–	community-based organization
DPHE	–	Department of Public Health Engineering
EARP	–	environmental assessment and review procedures
HTW	–	hand tube wells
IEE	–	initial environmental examination
LGD	–	Local Government Division
LGED	–	Local Government Engineering Department
LGI		local government institution
NGO	–	nongovernment organization
OFID	–	OPEC Fund for International Development
O&M	–	operation and maintenance
OPEC	–	Organization of the Petroleum Exporting Countries
PCR	–	project completion report
PIU	–	project implementation unit
PLC	–	public limited company
PMU	–	project management unit
POA	–	project operating account
PPME	–	project performance monitoring and evaluation
PPRC	–	pourashava performance review committee
PRS	–	poverty reduction strategy
PWSS	–	pourashava water supply section
SDP-WSSB	–	Sector Development Programme—Water and Sanitation Sector in Bangladesh
SEP	–	sector investment plan
TLCC	–	Town Level Coordinating Committee
WASA	–	water supply and sewerage authority
WATSAN		water and sanitation committee
WSS	–	water supply and sanitation

## NOTES

- (i) The fiscal year (FY) of the Government ends on 30 June.
- (ii) In this report, "\$" refers to US dollars.

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## **LOAN AND PROJECT SUMMARY**

<b>Borrower</b>	People's Republic of Bangladesh
<b>Classification</b>	Targeting classification: Targeted intervention Sector: Water supply, sanitation, and waste management Subsector: Water supply and sanitation Themes: Inclusive social development, capacity development, governance Subthemes: Human development, organizational development, public governance
<b>Environment Assessment</b>	Category B
<b>Project Description</b>	<p>The Project will use a demand- and performance-driven approach to extend water supply and sanitation to approximately 1.6 million people in about 16 participating secondary towns (pourashavas). The Project consists of three components: part A: water supply improvements, part B: sanitation improvements, and part C: institutional development. The project design includes several special features, such as a phased investment structure for performance-based resource allocation, special attention to tariffs and financial sustainability, innovative contract packaging to minimize delays and leakage, and extensive nongovernment organization and community participation. The Project will follow a sector lending approach and will support the Government's vision and strategy for the sector as outlined in the Sector Development Programme—Water and Sanitation Sector in Bangladesh (SDP-WSSB).</p>
<b>Rationale</b>	<p>At present, 72% of the urban population and 59% of the rural have access to safe water. Sanitation coverage in urban areas is estimated at about 74%, and in rural areas about 57%. Limited piped water supply is available in 102 of the 308 pourashavas for about 2–12 hours per day; supplied water often has a high iron and mineral content. The population not served by piped systems generally rely on hand tube wells, ponds, and other sources of doubtful quality. Contamination of water sources is a serious problem. Twenty-two percent of about 7 million tube wells in the country are contaminated with arsenic beyond the Bangladesh standard of 0.05 milligrams/liter.</p> <p>Overall, the sector is overly centralized and does not efficiently respond to user needs and demands. In spite of improvements in reducing water-related mortality and morbidity rates, and improving physical coverage, development in the sector is needed to address (i) inadequate cost recovery, (ii) absence of demand management, (iii) inefficient service provision, (iv) lack of financing, (v) lack of involvement of users in water utility planning and operation, and (vi) lack of autonomy for pourashavas to carry out their mandate.</p>

Despite its many challenges, Bangladesh's water sector does present a significant opportunity at this time. The Government clearly places a strong focus on development of the sector in its poverty reduction strategy, which has broad funding agency support. The SDP-WSSB, developed through extensive consultation, outlines a clear and comprehensive vision for the sector. The Government and external development partners are taking a broad-based and deliberate approach to sector reform and institutional change. Momentum within the sector is significant, and the environment is conducive for change. An Asian Development Bank (ADB) investment in support of the SDP-WSSB, would be catalytic for the sector.

### Impact and Outcome

The primary impact of the Project is to improve the living conditions and health standards in participating secondary towns and improve sustainability of pourashava water utilities. The outcome of the Project will be sustainable access to improved and safe water and sanitation services in the project areas. More specific outcomes include (i) increased quantity and quality of water supply; (ii) increased sanitation coverage; (iii) improved community awareness of the link between proper hygiene, sanitation, and health; (iv) improved capacity of pourashavas to implement, operate, manage, and maintain water supply and sanitation investments; (v) adoption of improved management practices consistent with the SDP-WSSB for greater efficiency and sustainability of local water utilities; and (vi) improved capacity of the Department of Public Health Engineering (DPHE) to plan, design, supervise, monitor, and provide technical assistance to pourashavas and local water utilities.

### Project Investment Plan

The investment cost of the Project is estimated at \$71.1 million equivalent, including taxes, duties, interest charges on the ADB loan, and physical and price contingencies. About 72% of the base cost is allocated for water supply, 12% for sanitation, and 16% for institutional strengthening.

### Financing Plan

(\$ million)		
Source	Total	%
Asian Development Bank	41.0	57.7
OPEC Fund for International Development	9.0	12.7
Government and Pourashavas <sup>a</sup>	20.5	28.8
Community	0.6	0.8
<b>Total</b>	<b>71.1</b>	<b>100.0</b>

OPEC = Organization of the Petroleum Exporting Countries.

<sup>a</sup> Pourashava contributions will primarily consist of land.

Source: Asian Development Bank estimates.

### Loan Amount and Terms

A loan of \$41 million equivalent from the Special Funds resources of ADB will be provided. The loan will have a 32-year term including a grace period of 8 years, and an interest charge of 1% per annum during the grace period and 1.5% per annum thereafter. ADB will finance 57.7% of the project costs.

<b>Allocation and Relending Terms</b>	Fifty percent of the investment for piped water supply systems will be relented to pourashavas with an amortization period of 20 years, including a 5-year grace period, and an interest charge of 7% per annum.
<b>Period of Utilization</b>	Until 30 June 2013
<b>Estimated Project Completion Date</b>	31 December 2012
<b>Executing Agency</b>	Department of Public Health Engineering
<b>Implementation Arrangements</b>	A project management unit (PMU) will be established within DPHE. The PMU will be responsible for day-to-day project management. A project steering committee, chaired by the secretary of the Local Government Division, will be created to provide policy guidance and overall coordination of project implementation. In each participating pourashava, a project implementation unit (PIU) will be established to be responsible for coordination of all local activities and for the full engagement of town committees.
<b>Procurement</b>	Goods, works, and services financed by ADB will be procured in accordance with ADB's <i>Procurement Guidelines</i> (2006). Contracts above \$2 million will be procured using international competitive bidding procedures, contracts up to 2 million will be procured through national competitive bidding procedures, and items costing the equivalent of \$100,000 or less may be procured through shopping procedures. Civil works contracts for community latrine and water point construction, which will each be under \$10,000, will be procured through community participation.
<b>Consulting Services</b>	<p>Consultants will be selected and engaged using ADB's quality- and cost-based selection procedures in accordance with ADB's <i>Guidelines on the Use of Consultants</i>.</p> <p>Consulting services will be provided in three packages at the PMU: (i) project management, engineering design, and supervision; (ii) institutional capacity building; and (iii) awareness programs. In addition, the PIUs will engage nongovernment organizations in the pourashavas to mobilize communities and construct community water points and sanitation facilities. An estimated 80 person-months of international consulting and 1,581 person-months of national consulting expertise will be required.</p>
<b>Project Benefits and Beneficiaries</b>	In addition to improving the overall water supply and sanitation situation in the participating pourashavas, the Project is expected to provide safe water supply and sanitation with emphasis on poor households, particularly households headed by women in the slum and fringe areas. The Project specifically targets the poor in terms of the following components: shared standpipes, shared safe water points utilizing arsenic-free water sources, and community latrines and public toilets. Under the Project, 672 water

standpipes and 360 safe water points are committed solely for use in slum areas where approximately 70% are poor. A gender strategy ensures that gender issues are addressed, women benefit equally from the Project, and interventions avoid gender bias.

The initial environmental examinations show that subprojects will result in substantial net environmental and public health benefits including (i) reduced risk of waterborne diseases from improved water supply through the provision of better access to safe and adequate water supply, and from improved sanitation and hygiene; (ii) reduced risk of arsenic-related diseases, particularly for households that currently use shallow tube wells that are likely to be contaminated with arsenic; (iii) reduced groundwater contamination and avoided sewage flow in drainage canals, water ponds, and rivers; and (iv) increased social benefits from community development.

The Project is designed to minimize land acquisition and resettlement impacts. The subproject selection criteria rules do not allow subprojects with significant resettlement impacts. Careful subproject siting and alignment will minimize impacts.

Improved safe water supply and sanitation services, and increased awareness will reduce health costs, decrease malnutrition, and increase labor productivity—issues critical to reducing poverty. The Project will bring substantial economic benefits, including (i) the value of nonincremental water supply; (ii) the value of incremental water supply; (iii) avoided cost of diarrhea and dysentery, which are prevalent diseases in pourashavas; and (iv) avoided loss of productivity/income due to a reduction in the morbidity rate. Since about 70–94% of the pourashava population depend on nonpiped water to satisfy everyday needs, the amount of nonincremental water supply is significant.

## **Risks and Assumptions**

The following are considered risks to the Project: (i) lack of support for implementing reforms, including tariff changes; (ii) resistance to allowing greater autonomy to pourashavas to operate their water utilities; (iii) substantial delays in project start-up due to delays in staffing the PMU and PIUs; (iv) DPHE inexperience in managing ADB sector loans (as opposed to project loans); (v) inadequate capacity of the pourashavas in project implementation; (vi) noncompliance with agreements and understandings reached during the Project; and (vii) inability to staff the PMU and pourashava water supply sections in a timely manner to ensure effectiveness of training and capacity-building programs. These risks will be addressed by (i) requiring most reforms to be undertaken in the first phase of the Project, with significant capacity-building support; and developing sustainable tariff plans and public awareness campaigns in each pourashava to sensitize the population about the importance of cost-recovery tariffs; (ii) supporting the transition to the pourashava-owned public

limited company as an optional operating model for pourashava water supply sections, which will allow much greater flexibility to recruit and retain high quality staff; (iii) receiving assurances from the Local Government Division and DPHE that the PMU will be staffed immediately after internal Government clearance for the Project is received, well before final loan approval; (iv) providing substantial consulting support to DPHE and the pourashavas for project management and implementation; (v) creating and involving Town Level Coordinating Committees to ensure broader support for project agreements and commitments; and (vi) providing partial financing for incremental staff during the Project.



## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on (i) a proposed loan to the People's Republic of Bangladesh for the Secondary Towns Water Supply and Sanitation Sector Project, and (ii) proposed administration of a loan for the Project to be provided by the OPEC (Organization of the Petroleum Exporting Countries) Fund for International Development (OFID). The design and monitoring framework is in Appendix 1.

## II. RATIONALE: SECTOR PERFORMANCE, PROBLEMS, AND OPPORTUNITIES

2. Bangladesh has a population of about 140 million,<sup>1</sup> a quarter live in urban areas. The overall population grows at 1.4% per year, while the urban population increases at nearly twice (2.5%)<sup>2</sup> the national rate. As a result, the urban population is projected to exceed the rural population in about 30 years. Uncontrolled urbanization and rural-to-urban migration is creating heavy and largely unabated demands on the country's urban infrastructure. Inadequacy of basic urban services is a chronic problem.

3. Although poverty incidence decreased significantly from 59% in 1991 to about 42% in 2005,<sup>3</sup> Bangladesh remains one of the world's least developed countries. It is ranked 139th of 177 countries in the 2000 human development index. Average annual per capita income is about \$400, infant mortality is 53 per 1,000 live births, and the adult literacy rate is only about 40%.<sup>4</sup>

4. According to Government statistics, urban centers contribute more than 40% to the country's gross domestic product. However, inadequacy of urban services, including water and sanitation, are severe hindrances to the continued development of urban areas, as well as efforts to reduce severe poverty. In recognition of this, the Government included the improvement of water supply and sanitation as part of its seven-point strategic agenda for reducing poverty in its 2005 poverty reduction strategy (PRS),<sup>5</sup> which has received wide funding agency support.

5. The PRS aims to reduce poverty by 30%, extreme poverty by 5%, and child mortality to 31 per 1,000 live births; and increase literacy to 90% by 2015. The Government has likewise committed to achieving the Millennium Development Goals, including reducing by half the proportion of people without sustainable access to safe water supply and sanitation by 2015, and by two thirds the under-5 mortality rate, which in Bangladesh is significantly affected by waterborne diseases.

6. Government goals and the priority given to providing access to safe drinking water and appropriate sanitation are reflected in the Sector Development Programme—Water and Sanitation Sector in Bangladesh (SDP-WSSB), developed with significant funding agency and stakeholder consultation, and approved in January 2006.<sup>6</sup> A summary of the salient points in the SDP-WSSB are in Appendix 2 and the full SDP-WSSB document is in Supplementary Appendix A.

7. The water and sanitation sector is an extremely high priority for the Government. This Project aims to help the Government achieve its PRS targets and the Millennium Development Goals through assistance that supports the clearly defined SDP-WSSB for the water sector. This document is based on consultants' feasibility reports prepared during an Asian Development Bank (ADB) financed technical assistance project (footnote 2), understandings reached during multiple missions, and

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<sup>1</sup> Unit for Policy Implementation, Local Government Division. 2005. *Sector Development Programme, Water and Sanitation Sector in Bangladesh*. Dhaka (September).

<sup>2</sup> ADB. 2004. *Technical Assistance to the People's Republic of Bangladesh for the Secondary Towns Water Supply and Sanitation Project*. Manila (TAR: BAN 36297, TA 4535-BAN, approved on 24 December 2004).

<sup>3</sup> In terms of urban-rural classification, the urban poverty rate is currently estimated at about 30%, while in rural areas, poverty incidence stands at nearly 45%.

<sup>4</sup> United Nations Development Programme. 2005. *Human Development Report*. Dhaka..

<sup>5</sup> Government of Bangladesh. 2005. *Poverty Reduction Strategy*. Dhaka.

<sup>6</sup> The SDP-WSSB was developed with support from Danish International Development Assistance.

extensive discussions with central and local governments, nongovernment organizations (NGOs), and community groups.

### A. Performance Indicators and Analysis

8. Bangladesh has made good progress in increasing service coverage for water supply and sanitation. In 1993, only 55% of the population had access to safe water supply and 14% to sanitation facilities.<sup>7</sup> At present, 71% of urban and 59% of rural populations have access to safe water (footnote 1). Sanitation coverage in urban areas is estimated at about 74%, and in rural areas at about 57% (footnote 1).

9. Piped water supply is available in 102 of the 298 participating secondary towns (pourashavas)<sup>8</sup> for about 2–4 hours per day (footnote 2), but service is limited to town centers. Quality of the piped water in many pourashavas is poor, and often supplied water includes high iron and mineral content. People not served by the piped systems generally rely on hand tube wells (HTWs), ponds, and other sources of doubtful quality; 76% rely on HTWs.

10. Contamination of water sources is a serious problem. Of the approximately 7 million tube wells in the country, 22% are contaminated with arsenic beyond the Bangladesh standard of 0.05 milligrams per liter. Moreover, about 29% of the shallow tube wells and 9% of the deep HTWs are contaminated by bacteria because of poor maintenance and sanitation conditions.<sup>9</sup> The prevalence of arsenic and iron mandates the use of higher cost technologies, such as those necessary to access arsenic-free deep aquifers, and the construction of arsenic and iron removal plants.

11. Sanitation coverage in urban areas increased from 53% in 2003 to 74% by 2005 (footnote 1). Coverage in rural areas almost doubled from 29% to 57% during this period as a result of the accelerated program to achieve the national sanitation goal of 100% coverage by 2010 (footnote 1). However about 30% of urban households have no sanitary latrines. While construction of latrines is the easiest measurable indicator, the mere construction of latrines does not ensure their usage, or a proportionate improvement in hygiene behavior and the health of the population. A vast amount of work is needed to change behavior and attitudes to sanitation and hygiene. Only then will the full benefits of improved sanitation be realized. This view is shared by many stakeholders active in the sector.

12. The Government and external agencies have invested heavily in the water supply and sanitation (WSS) sector in Bangladesh (Appendix 3). ADB projects in the sector include the District Towns Water Supply Project (\$14.4 million loan, 1982) and the Second Water Supply and Sanitation Project (\$31 million loan, 1993). ADB's first investment was rated partly successful.<sup>10</sup> The second, which included interventions in nine towns, was rated successful.<sup>11</sup>

13. Lessons learned through past investments were carefully studied and incorporated into the Project. These include (i) adding enforceable milestones into the Project in the form of a phased performance-based funding approach; (ii) placing high priority on financial performance and autonomy of the pourashava water supply section (PWSS) in the initial project stages by, among others, mandating tariff reforms, adopting double-entry accounting systems, separating water supply accounts, training staff, and embracing the move to public limited company operating models; (iii) drastically reducing the number of contracts and procurements to minimize processing and implementation delays; and (iv) actively engaging pourashava chairpersons and communities through extensive consultations, and the establishment of Town Level Coordinating Committees (TLCC), to ensure

<sup>7</sup> ADB. 1993. *Report and Recommendation of the President on a Proposed Loan and Technical Assistance Grants to the People's Republic of Bangladesh for the Second Water Supply and Sanitation Project*. Manila.

<sup>8</sup> A pourashava is a secondary town, governed by an elected council of commissioners headed by a chair.

<sup>9</sup> Arsenic Policy Support Unit. 2004. *Risk Assessment of Arsenic Mitigation Option*. International Training Network-Bangladesh.

<sup>10</sup> ADB. 1995. *Project Performance Audit Report on the District Towns Water Supply Project in Bangladesh*. Manila (Loan 571-BAN[SF]).

<sup>11</sup> ADB. 2004. *Project Completion Report on the Second Water Supply and Sanitation Project in Bangladesh*. Manila (Loan 1264-BAN[SF]).

stronger commitment and smoother implementation. More information on lessons learned and how they are incorporated into the Project are in Appendix 4 and in the special features section of this document.

## **B. Analysis of Key Problems and Opportunities**

14. Based on the National Policy for Safe Water Supply and Sanitation (1998), statutory responsibility for the WSS sector lies with the Ministry of Local Government, Rural Development, and Cooperatives. The ministry delegates the functional responsibilities of the WSS sector to the Department of Public Health Engineering (DPHE), Local Government Engineering Department, city corporations, and water supply and sewerage authorities in Dhaka and Chittagong. Historically, DPHE has been responsible for planning, designing, and implementing water supply and sanitation services in rural and urban areas. However, recent policy shifts envision transforming DPHE into more of a facilitator and technical support institution, while transferring greater responsibility to local bodies.

15. Provision, and operation and maintenance (O&M) of water supply are statutory responsibilities of pourashavas, according to the Pourashava Act of 1977, but execution of the act varies across Bangladesh.<sup>12</sup> Within the pourashava, a PWSS is responsible for the O&M of the town's water supply systems. PWSSs, however, lack the resources as well as the financial, technical, and managerial capacities to undertake their responsibilities. They do not have the autonomy to set their own water tariffs, create positions, and appoint personnel; these activities are conducted by the national Government on a somewhat ad-hoc basis. Operation of water utilities is based on outmoded procedures, e.g., use of a single-entry accounting system, manual billing and collection, and manual customer databases. The water utilities are mere administrative units of the local governments, not separate legal entities, and their accounts are part of the overall accounts of the pourashava.

16. Overall, the sector is overly centralized and does not efficiently respond to user needs and demands.<sup>13</sup> Planning and implementation is largely a supply-driven, top-down, and target-oriented process; and suffers from duplication, unclear priorities, and uncoordinated development. Agencies typically prefer to meet physical targets rather than establish and monitor processes for reaching goals related to facility operation, management, utilization, and maintenance. In spite of improvements in reducing water-related mortality and morbidity rates, and improving physical coverage, further development in the sector is needed to address (i) inadequate cost recovery, (ii) absence of demand management, (iii) inefficient service provision, (iv) lack of financing, (v) lack of involvement of users in water utility planning and operation, and (vi) lack of autonomy for pourashavas to carry out their mandate.

17. Despite these challenges, Bangladesh's water sector does present a significant opportunity at this time. The Government clearly places a strong focus on development of the sector in its PRS, which has broad funding agency support. The SDP-WSSB, developed through extensive consultation, outlines a clear and comprehensive vision for the sector (Appendix 2). The Government and its external development partners are taking a broad-based and deliberate approach to sector reform and institutional change. Momentum in the sector is significant, and the current environment is conducive for change.<sup>14</sup> An ADB investment in support of the SDP-WSSB, would be catalytic for the sector.

18. ADB's country strategy for Bangladesh<sup>15</sup> is to continue helping the Government to expand access to improved water supply and sanitation, and build the capacity of key agencies and local

<sup>12</sup> Within the four sample towns studied under the project preparatory technical assistance, two (Brahmanbaria and Sirajganj) are jointly managed by the pourashava and DPHE, Pirojpur is fully managed by the pourashava, while Jessore is fully managed by DPHE.

<sup>13</sup> World Bank. 2004. *Project Appraisal Document on the Bangladesh Water Supply Program Project (May 18)*. Washington, DC.

<sup>14</sup> Extensive discussions and consultations with other development partners active in the sector were carried out during project preparation. As a result, the Project is well synchronized with other sector reform initiatives aimed at strengthening and giving greater responsibility and/or autonomy to pourashava governments.

<sup>15</sup> ADB. 2005. *Country Strategy and Program (2006–2010): Bangladesh*. Manila.

government institutions. While the primary focus will be on secondary towns, selected interventions will support Bangladesh's megacities (i.e., Chittagong and Dhaka) to foster management efficiency and strengthen public utility institutions. The operating environment for megacity utilities needs to be improved to be able to attract investments to improve service and meet growing urban demand.

19. ADB's strategy recommends that ADB play a major role in supporting policy and institutional reforms to improve governance and efficiency in the urban water supply and sanitation sector. Assistance in the urban development and water sectors is to focus on strengthening municipal management and local resource mobilization, fostering clean urban environments, and improving basic living conditions in secondary towns and cities. The strategy also states that future investments will be performance based, and designed to reward secondary towns that demonstrate the greatest progress in implementing governance, participatory development, and other reforms. ADB aims to contribute to improved management efficiency and institutional strengthening so that local utilities can become economically viable, attract the investment required to service the poor, and meet growing urban demand. This Project is designed with several special features to closely follow and reinforce the overall ADB strategy for Bangladesh.

20. **Sector Lending Approach.** The Project was formulated in line with the Government's sector policies and strategies, particularly the recently approved SDP-WSSB. The SDP-WSSB and related Government policies set forth clear and well-formulated development objectives, investment plans, institutional arrangements, and transition plans for the water supply and sanitation sector. DPHE, the Executing Agency for the Project, has experience managing externally funded projects, including projects funded by ADB (Appendix 3). However, DPHE will still need support in developing the capacity required to implement the SDP-WSSB (Supplementary Appendix B).

21. To support the Government's strong priority in the water and sanitation sector, and in particular SDP-WSSB initiatives, the Project's financing structure is based on ADB's sector lending modality. The Government meets the three requirements for sector lending: (i) a sector development plan, (ii) appropriate sector policies, and (iii) institutional capacity to implement the plan.<sup>16</sup>

22. A subproject will be an integrated package of water supply and sanitation improvements, and institutional development efforts in one pourashava.<sup>17</sup> ADB has reviewed four<sup>18</sup> of an estimated 16 subprojects that could be financed through the Project to confirm approaches, methodology, procedures for subproject appraisal, and overall feasibility (Supplementary Appendix C). The subprojects are viable in terms of technical, institutional, social, financial, economic, and environmental aspects. Subproject selection criteria and rankings of prospective subprojects are clearly defined and have been agreed to by the Government (Appendix 5).

### III. THE PROPOSED PROJECT

#### A. Impact and Outcome

23. The primary impact of the Project is to improve the living conditions and health standards in pourashavas and improve sustainability of pourashava water utilities. The overarching outcome of the Project will be sustainable access to improved and safe water and sanitation services in the project areas. More specific outcomes include (i) increased quantity and quality of water supply; (ii) increased sanitation coverage; (iii) improved community awareness of the link between proper hygiene, sanitation, and health; (iv) improved capacity of pourashavas to implement, operate, manage, and maintain water supply and sanitation investments; (v) adoption of improved management practices consistent with the SDP-WSSB for greater efficiency and sustainability of local water utilities; and (vi)

<sup>16</sup> DPHE has not previously implemented an ADB sector project, institutional strengthening support will be provided to build this capacity.

<sup>17</sup> The water supply improvements in each subproject include two phases. Entry into phase 2 is not automatic, but based on assessments of phase 1 performance criteria, and review and approval by ADB and DPHE, as discussed in the special features section of this document.

<sup>18</sup> Brahmanbaria, Jessore, Pirojpur, and Sirajganj.

improved capacity of DPHE to plan, design, supervise, monitor, and provide technical assistance to pourashavas and local water utilities.

## **B. Outputs**

24. The Project will use a demand and performance driven approach to extend water supply and sanitation to approximately 853,000 people in about 16 pourashavas. The Project consists of three components: (i) water supply improvements, (ii) sanitation improvements, and (iii) institutional development.

### **1. Part A: Water Supply Improvements**

25. The water supply improvement component will include rehabilitation, development, and expansion of water sources, treatment facilities, and piped water supply systems in selected pourashavas. Three technical options will be used to ensure that all segments of the urban population benefit from the Project: (i) piped supply with individual house connections; (ii) shared standpipes;<sup>19</sup> and (iii) shared safe water points, utilizing arsenic-free groundwater sources for poor households. All interventions will be in accordance with the National Policy for Arsenic Mitigation (2004).

26. Water supply improvements will be implemented in two phases. In the first phase the existing piped water supply system within the pourashava will be rehabilitated and restored to its original capacity. First phase physical works will include refurbishment/replacement of pipelines, treatment facilities, and pumps; and complete metering of the system. Additional household connections within the existing coverage area will be encouraged. Participating pourashavas will be required to adopt sustainable tariffs during phase 1. To support the tariff changes, the Project will initiate awareness campaigns (Supplementary Appendix D) to help customers understand and accept the benefits of metering; these include (i) improved supply and demand management, (ii) reduced unaccounted-for water, (iii) increased water conservation by customers, and ultimately (iv) extended daily water supply hours.

27. Pourashavas will qualify for phase 2 if they meet a set of performance and reform criteria (Appendix 5). In phase 2, the capacity and geographic coverage of the piped water supply systems will be expanded to cover additional areas that are financially feasible. Metered standpipes along the pipe network will be provided in areas where households are not capable of meeting the cost of an individual connection. Other poor areas that cannot be efficiently reached by the pipe network will be provided with arsenic-free water through community-managed deep HTWs and safe water points. NGOs will be engaged to form and train water user groups to collect user fees, and provide effective O&M for the community water supply facilities (Supplementary Appendix E).

### **2. Part B: Sanitation Improvements**

28. The sanitation improvement component will support the Government's National Sanitation Policy, which aims to achieve 100% sanitation coverage by 2010. The basic approach of the sanitation component will be to increase appropriate knowledge, attitudes, and practices of the beneficiary population; and generate an increased demand for improved sanitation, reducing the incidence of waterborne diseases (Supplementary Appendix F). Experience in Bangladesh suggests that low-cost sanitary hardware is available through the private sector, and that it is affordable and accessible to 85% of the population. The need for Government intervention in hardware provision, therefore, is very limited. In addition to increasing awareness, the Project will support individual households by providing technical advice and guidance for sanitary latrine construction; and construct community, school, and public toilets (Supplementary Appendix F). Both the awareness campaign and community toilet construction and management activities will incorporate gender-appropriate and user-friendly

<sup>19</sup> Within informal settlements, a metered bulk connection will be provided to local community-based organizations where possible, which in turn would be allowed to provide household connections to poor households, and manage billing and collection within the community. Metered standpipes will be used in informal settlements where this modality is not viable.

approaches that have been tested in Bangladesh. All activities related to the sanitation program will be carried out through NGOs and community-based organizations (CBOs).

### **3. Part C: Institutional Development**

#### **a. Institutional Strengthening at DPHE**

29. The SDP-WSSB envisions that DPHE, as the lead sector institution, will coordinate, facilitate, and monitor all sector activities. The Project will enable DPHE to take on the new responsibilities. Specifically, the Project will (i) increase DPHE's ability to manage sector investments by providing support for managing and implementing the sector Project; (ii) assist in institutionalizing DPHE's role as a technical support agency to the PWSSs, by positioning the DPHE-based Project Management Unit (PMU) as the primary advisory body for all technical, contractual, financial, and implementation activities under the Project; (iii) support the development of a DPHE training center by developing a 5-year training program; developing a trainers pool; designing training curricula/courses for DPHE, pourashavas, and other users; and delivering initial training courses (Supplementary Appendix G); and (iv) support DPHE's sector monitoring and planning capability by providing training and equipment support for a geographic and management information section to be established.

#### **b. Institutional Strengthening of Pourashavas**

30. The Project will support pourashavas in their effort to assume full responsibility for local water supply and sanitation activities, as envisioned in the SDP-WSSB and the National Policy for Safe Water Supply and Sanitation (1998). The Project will (i) finance computerization of the PWSSs; (ii) institutionalize double-entry accounting at the PWSSs; (iii) train pourashava staff in accounting and financial management; operation and management of their water supply systems; and the setting, billing, and collection of tariffs; (iv) establish town water and sanitation coordination committees that ensure full representation from all socioeconomic groups and women; (v) institutionalize processes for effective community engagement; and (vi) significantly improve pourashava capacity to tender, execute, and manage contracts for infrastructure improvements. In addition, the Project will support the SDP-WSSB objective of gradually transitioning the PWSSs to become public limited companies (PLCs)<sup>20</sup> by providing additional financing to pourashavas that choose to pursue this option (Supplementary Appendix H).

#### **c. Project Management and Implementation Support**

31. Consulting services will be engaged to help with project management at the PMU and project implementation units (PIUs) to implement and supervise the various interventions. Consulting support will include (i) project management and monitoring; (ii) planning and design of subprojects; (iii) contract structuring, tendering, execution, and management; (iv) construction supervision; (v) preparation of a health education program; (vi) preparation of the tariff awareness program; and (vii) planning of pourashava and DPHE capacity-building programs. Consulting services will also include engagement of NGOs to manage the sanitation program, community water-supply infrastructure improvements, and awareness programs.

#### **d. Project Performance Monitoring and Evaluation**

32. A project performance monitoring and evaluation (PPME) program will be carried out by the pourashavas with guidance from the PMU. Consulting support will be provided to the PMU to define the PPME program, and identify indicators and methodologies for monitoring benefits such as increased coverage, service level and consumption, efficiency in operations and financial management, and health improvements among the beneficiary population.

<sup>20</sup> The PWSS is a distinct section within the pourashava with assigned staff. The public limited company will allow this section to operate with greater operational autonomy.

## **C. Special Features**

### **1. Performance-Based Approach**

33. The Project is structured into two phases, based on lessons learned from other ADB projects. Phase 1, which will last 2 years, will include the complete rehabilitation and metering of piped water supply systems, the introduction of sustainable tariffs, and a range of other pourashava institutional reforms. Pourashavas will qualify for inclusion in phase 2 only if they successfully manage phase 1 and meet a clearly defined set of performance criteria (Appendix 5), which will ensure the sustainability of a larger water supply investment. Pourashavas that fail to meet all criteria by the end of the first phase will be given a 6-month grace period to improve their performance, with additional capacity-building support. Pourashavas that fail to demonstrate their commitment to reforms and the sustainability of their water supply systems will not receive funding for phase 2.

### **2. Emphasis on Tariffs and Financial Sustainability**

34. The Project will place a strong emphasis on tariff reform and financial sustainability of the investments. Adoption of a tariff reform plan and implementation of the first major tariff revision, before the end of phase 1, are prerequisites for pourashavas to qualify for the larger investments envisioned in phase 2. Piped water supply systems in the project towns will be fully metered. An aggressive public awareness campaign on the need for metering and tariff changes will be carried out in each pourashava to help the pourashava leadership with this sometimes politically difficult initiative. In addition to tariff reforms, pourashavas will be required and supported to (at a minimum) completely separate their water supply accounts from those of the pourashava, establish double-entry book keeping for the PWSS, inventory pourashava water supply assets, have key staff trained in financial management, and share PWSS financial performance data shared with the public through the TLCC. Outsourcing of billing and collection will be strongly encouraged.

### **3. Supporting Institutional Change in Pourashavas**

35. The recently approved SDP-WSSB clearly states that the preferred institutional model for pourashava urban water utilities is a pourashava-owned PLC. A PLC would operate under the *Companies Act of 1994*, and would allow the pourashava greater flexibility and autonomy in its water supply operation and financial management, align incentives within the water supply sections for more efficient management of the utilities, resolve significant bottlenecks in staff recruitment and retention, and position them well for future private-sector-financed system expansion and operation. However, given the limited awareness on the significant benefits of operating a water supply utility as a PLC, widespread adoption of the model will be slow.

36. Given the limited experience and awareness of the PLC model, the Project will not mandate its adoption by all project towns. However, the Project will raise awareness among the pourashavas about the model and explain its key elements, processes, benefits, and risks. The pourashavas that decide to adopt the PLC model by the end of phase 1 will receive additional support in the form of extra technical assistance and budgetary support. Detailed discussion of the benefits of the PLC model, and the additional support to be provided to pourashavas that choose this option are included in Supplementary Appendix H.

### **4. NGO Participation**

37. The NGO sector is developed, and the Project aims to take full advantage of their capacity by engaging them to implement significant parts of the overall project investment. The PIUs will engage NGOs and CBOs to assist in developing and implementing the sanitation improvement component of the Project. In addition, NGOs will manage the process of constructing community infrastructure such as water points, latrines, and standpipes; and manage the entire process of organizing and training community user groups to own, operate, and manage such infrastructure. The sanitation improvement program is expected to significantly increase the demand for latrine hardware, which will be entirely

supplied through pourashava private entrepreneurs. NGOs will conduct the information and education campaign on tariffs and metering.

## **5. Innovative Contract Packaging**

38. All civil works under the Project will be packaged in a limited number of contracts, which will minimize administrative burden, implementation delays, and transaction costs. In phase 1, all civil works, including the rehabilitation of production tube wells, treatment plants, and storage facilities; as well as the rehabilitation and metering of the entire distribution system will be grouped into one contract. Phase 2 will comprise three contracts: (i) all source development works, (ii) water treatment and storage, and (iii) expansion of the distribution network. As a result, civil works in each pourashava will be carried under a total of four contracts executed with the pourashava, while the PIU and PMU will carry out construction supervision and quality assurance.

39. In addition to the grouping of civil works and procurement, each contract in the second phase will include support for the full O&M of the pourashava systems for a minimum of 1 year.<sup>21</sup> While ensuring accountability and more attention to quality on the part of the contractor, this process will also introduce pourashavas to the benefits of private O&M contracts, and help ease the transition to full pourashava ownership and operation of the systems. Contract and transaction advisory support will be provided through the Project to assist the PMU and the pourashavas in tendering, negotiating, and executing these contracts.

## **6. Community Management of Common Infrastructure**

40. The Project will provide public standpipes, deep HTWs, and community latrines in poor areas and areas not reached by the pipe network. Contracting/development of these community facilities, as well as their O&M, will be managed by local user groups/CBOs. Experienced NGOs will be engaged through the PIU to support the formation of such user groups/CBOs, and to train and build their awareness on the range of skills and responsibilities associated with community ownership of infrastructure.

41. Safe water points will be constructed by the private sector, contracted by the user group/CBO with technical support from the PIU.<sup>22</sup> Market and terminal associations will manage the public toilets to be constructed in their areas, while school toilets will be managed by the school administrations. Community latrines will be built by the communities, with technical and software support from the PIU. The communities will also be responsible for soliciting contributions and subsequently for O&M of latrine facilities. The models developed and used by other agencies such as the United Nations Children's Fund (UNICEF) and Danish International Development Assistance will be used for community sanitation facilities.

## **7. Linkage to Other Ongoing Government and ADB Initiatives**

42. Where possible, project interventions will be closely coordinated with the Urban Governance and Infrastructure Improvement Project,<sup>23</sup> also financed by ADB. The performance-based structure of the Project and the establishment of coordination bodies in the towns are similar to the interventions in the urban governance project. Pourashavas participating in the Project will be able to access some of the training programs provided through the Urban Management Support Unit and other training institutions in Bangladesh.

<sup>21</sup> Typical civil works contracts include only defects liability, covering between 6 months and 1 year.

<sup>22</sup> Costs for community safe water points will be borne partly by the community. A fixed grant of Tk56,000 will be provided to each user group for financing 80% of the estimated cost of construction; it will be disbursed upon complete installation, and quality inspection by the PIU.

<sup>23</sup> ADB. 2002. *Report and Recommendation of the President to the Board of Director on a Proposed Loan and Technical Assistance Grant to the People's Republic of Bangladesh for the Urban Governance and Infrastructure Improvement (Sector) Project*. Manila.

## D. Project Investment Plan

43. The project investment cost is estimated at \$71.1 million equivalent, including taxes, duties, interest charges on the ADB loan, and physical and price contingencies. About 72% of the base cost is allocated for water supply, 12% for sanitation, and 16% for institutional strengthening. A summary of the cost estimates is given in Table 1. The detailed cost estimates and the financing plan are in Appendix 6.

**Table 1: Project Investment Plan**

(\$ million)

Category	Amounts
<b>A. Base Costs<sup>a</sup></b>	
1. Component 1: Water Supply Improvements	
a. Brahmanbaria	3.6
b. Jessore	3.0
c. Pirojpur	2.2
d. Sirajganj	2.3
e. Other pourashavas	25.9
<b>Subtotal (A1)</b>	<b>37.0</b>
2. Component 2: Sanitation Improvements	
a. Awareness campaign	1.3
b. Public and community latrines	3.3
c. School latrines	0.4
d. Environmental management	0.7
<b>Subtotal (A2)</b>	<b>5.7</b>
3. Component 3: Institutional Development	
a. Project management and implementation support	4.9
b. Institutional strengthening at DPHE and pourashavas (capacity building)	1.2
c. PIU operational support	0.8
<b>Subtotal (A3)</b>	<b>6.8</b>
<b>Subtotal (A)</b>	<b>49.5</b>
<b>B. Contingencies</b>	
1. Physical Contingencies <sup>b</sup>	2.6
2. Price Contingencies <sup>c</sup>	7.0
<b>Subtotal (B)</b>	<b>9.6</b>
<b>C. Financing Charges During Implementation</b>	2.0
<b>D. Taxes and Duties<sup>d</sup></b>	9.9
<b>Total</b>	<b>71.1</b>

ADB = Asian Development Bank, DPHE = Department of Public Health Engineering, PIU = project implementing unit.

<sup>a</sup> Base costs are as of December 2005.

<sup>b</sup> Physical contingencies are computed at 10% for nongovernment organization contracts, and consultancy; 5% for civil work and equipment, and 3% for others.

<sup>c</sup> Price contingencies are computed at 1.9% in all years for foreign cost, and at 6% in all years for local costs.

<sup>d</sup> Taxes and duties are computed at 15% value-added tax for all goods and 20% custom duties for imported goods.

Note: Exchange rate of Tk65 = \$1 is used.

The ADB loan has an interest rate of 1% during the implementation period; the OPEC (Organization of the Petroleum Exporting Countries) Fund for International Development loan has an interest rate of 1% and a service charge of 1% during implementation.

Source: Asian Development Bank estimates.

## E. Financing Plan

44. The Government has requested a loan of \$41 million equivalent from ADB's Special Funds resources to help finance the Project. The loan will have a 32-year term, including a grace period of 8 years, and an interest charge of 1% per annum during the grace period and 1.5% per annum thereafter.

45. Part of the loan proceeds will be onlent to each participating pourashava in a blend of grant and loan; the term will depend on the component. For piped water schemes, 50% of construction cost will be a loan at an interest rate of 7% for 20 years including a 5-year grace period, while 50% will be a grant.<sup>24</sup> For the community water supply and sanitation component, 100% of the construction cost will be a grant. The Government will bear the foreign exchange risk.

46. The ADB loan will cover about 57.7% of the total project cost. ADB will fund 100% of equipment, consulting, NGO contracts, vehicles, office equipment, and interest charges during the project period; 55% of civil work; and 40% of incremental recurrent costs. About \$20.5 million equivalent (28.8% of the total project cost) will be provided by the Government and participating pourashavas to finance 100% of tax and duties, land and resettlement, and part of civil work and incremental recurrent cost. The community will contribute \$0.6 million equivalent (0.8% of the total project cost) as 20% equity contribution to construct community toilets and water points. The financing plan is summarized in Table 2.

**Table 2: Financing Plan**

(\$ million)

Source	Total	Percent
Asian Development Bank	41.0	57.7
OFID	9.0	12.7
Government and Pourashavas <sup>a</sup>	20.5	28.8
Community	0.6	0.8
<b>Total</b>	<b>71.1</b>	<b>100.0</b>

OFID = OPEC (Organization of the Petroleum Exporting Countries) Fund for International Development.

<sup>a</sup> Pourashava contributions will primarily consist of land.

Source: Asian Development Bank estimates.

47. OFID will cofinance the Project on a parallel basis by providing a loan of \$9 million equivalent (12.7% of the total project cost). ADB, OFID, and the Government are in the process of confirming the cofinancing arrangements. The OFID loan is anticipated to have a term of 20 years, including a grace period of 5 years, with a 1% of interest rate and 1% service charge per annum. The OFID cofinancing will be used for civil works and equipment for the water supply improvement component in three to four pourashavas. In the event OFID cofinancing does not materialize, the number of pourashavas participating in the Project will be reduced.

## F. Implementation Arrangements

### 1. Project Management

48. DPHE will be the Executing Agency responsible for the overall technical supervision and execution of the Project. The PMU at DPHE, headed by a full-time project director and staffed by full-time DPHE staff (Appendix 7), will be responsible for day-to-day management of the Project. The PMU will (i) prepare the overall project implementation plan; (ii) manage the selection of eligible pourashavas in accordance with the established criteria; (iii) provide overall supervision in the preparation of feasibility studies, design, subproject appraisal reports, and construction supervision; (iv) provide support to pourashavas in tendering and executing contracts; (v) manage the overall training and capacity-building program for DPHE and the pourashavas; (vi) monitor and supervise all project management activities; (vii) organize monitoring and evaluation activities; (viii) prepare necessary project progress and project completion reports; and (ix) ensure full compliance with ADB's resettlement, environment, and other safeguards and policies.

49. A project steering committee, chaired by the secretary of the Local Government Division, will be created to provide policy guidance and overall coordination for project implementation.<sup>25</sup> The committee

<sup>24</sup> These are also the terms of the subsidiary loans under the World Bank-financed Water Supply Program Project, and the ADB-financed Urban Governance and Infrastructure Improvement Project.

<sup>25</sup> Committee membership will include the chief engineer, DPHE; project director, PMU; representatives from the Economic Relations Division and Finance Division of the Ministry of Finance; Planning Commission; Implementation Monitoring and

will hold its first meeting within 3 months of loan effectiveness, and meet at least once every 6 months thereafter, to coordinate and resolve any issues in project implementation. A pourashava performance review committee will be established within LGD and will be responsible for evaluating each of the pourashavas' performance and eligibility for phase 2.<sup>26</sup>

50. In each participating pourashava, a PIU will be established as soon as the pourashava enters into a subproject agreement with DPHE. The PIU will be headed by the pourashava chairperson and be staffed by PWSS staff and others as defined in Appendix 7. The PIU will be responsible for implementation and coordination of all local activities and for the full engagement of town committees.<sup>27</sup>

## **2. Subproject and Subsidiary Loan Agreements**

51. Each selected pourashava will be required to enter into a subproject agreement with DPHE prior to any investment. The subproject agreement will outline the overall guidelines for project implementation, and clearly define roles and responsibilities of DPHE and the pourashava. In addition, the subproject agreement will clearly highlight and define the performance and other criteria that the pourashava must meet to enter and be eligible for financing in phase 2.

52. Once detailed appraisals of rehabilitation works are done, with the endorsement of DPHE, the pourashava will enter into a subsidiary loan agreement with the Ministry of Finance for the investments related to its phase 1 piped water supply improvements. Based on reviews by DPHE and ADB, if a given pourashava qualifies to enter into phase 2, it will enter into a second subsidiary loan agreement for the financing required for system expansion and other phase 2 activities.

## **3. Implementation Period**

53. The Project will be implemented over 6 years, from 2007 to 2012. Phase 1 is expected to take 2 years and phase 2, 4 years. The implementation schedule is in Appendix 8.

## **4. Subproject Selection**

54. Eligibility to participate in the Project will be determined through a clearly defined selection methodology. An initial screening will identify pourashavas that are secondary towns (class A and B) and important small commercial towns, have a current population of over 50,000, and have not received any external assistance for water supply improvements valued at more than Tk50 million since 1998. To establish the final selection, pourashavas meeting the initial screening criteria will be ranked based on (i) need for piped water supply improvements; (ii) sanitary latrine coverage; (iii) quality of available water resources, and need for treatment; (iv) poverty incidence; (v) incidence of waterborne diseases, such as diarrhea and dysentery; and (vi) demonstrated institutional commitment to improving the sustainability of WSS operations. The methodology for the ranking of towns is explained in detail in Appendix 5.

55. Detailed assessments of rehabilitation works will be carried out in the selected towns to determine their eligibility for financing through phase 1 of the Project.<sup>28</sup> Based on this assessment, pourashavas that (i) have rehabilitation costs of not more than \$500 per connection, (ii) will not be

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Evaluation Division; Ministry of Health and Family Welfare, Ministry of Environment and Forests, Local Government Engineering Department, Power Development Board, Bangladesh Telephone and Telegraph Board, and pourashava chairs.

<sup>26</sup> Committee membership will include Secretary, LGD; Chief Engineer, DPHE; Joint Secretary, LGD; Director General, LGD; representatives from the Planning Commission, ERD, and IMED; and DPHE Project Director for this Project. ADB may participate in PPRC meetings as observer.

<sup>27</sup> Specifically, PIU responsibilities will include (i) procuring and managing all pourashava civil works; (ii) managing all local NGOs and CBOs in implementing the health and hygiene education programs, constructing community sanitation facilities, as well as constructing community water points; (iii) coordinating all pourashava activities with the PMU and ensuring that all interventions are in accordance with the pourashavas' needs; (iv) maintaining and managing all pourashava contracts, accounts, and other project management matters in full compliance with ADB and government guidelines; and (v) ensuring effective engagement of the pourashava community on all project-related matters.

<sup>28</sup> The top 16 towns will be included in the initial assessment of rehabilitation costs.

classified as category A for involuntary resettlement according to ADB's involuntary resettlement policy,<sup>29</sup> and (iii) will not be classified as category A for environmental impacts according to ADB's *Environment Policy* (2002) and *Environmental Assessment Guidelines* (2003),<sup>30</sup> and satisfy the environmental subproject selection criteria in the Project's environmental assessment and review procedures will be included in phase 1. To be eligible for financing under phase 2, subprojects should meet all phase 1 performance criteria<sup>31</sup> and (i) not be category A for involuntary resettlement; (ii) not be category A for environmental impacts, and satisfy the environmental subproject selection criteria in the Project's environmental assessment and review procedures; (iii) have investment cost for piped water systems of not more than \$900 per connection; and (iv) have total investment costs for phase 2 piped water supply improvements of not more than \$3 million.

## 5. Procurement

56. Goods, works, and services financed by ADB will be procured in accordance with ADB's *Procurement Guidelines* (2006). All procurement contracts will contain anticorruption provisions as specified by ADB. Procurement will generally be carried out by the PIUs under the guidance of the PMU, except for equipment and vehicles common to all project towns, which will be procured by the PMU. Procurement of goods and services, including civil works, will be carried out in accordance with the indicative procurement plan in Appendix 9.<sup>32</sup> National competitive bidding procurements refer to the Government's Public Procurement Regulations 2003.

## 6. Consulting Services

57. Consultants will be selected and engaged using ADB's quality- and cost-based selection or consultants' qualifications selection<sup>33</sup> procedures in accordance with ADB's *Guidelines on the Use of Consultants by ADB and its Borrowers* (2006). Full technical proposals will be used to evaluate all consulting packages of over \$1 million, while simplified technical proposals will be used for all others.

58. Consulting services will be provided in three packages at the PMU: (i) project management, engineering design, and supervision; (ii) institutional capacity building; and (iii) awareness programs. In addition, the PIU will engage pourashava NGOs to mobilize communities and construct community water points and sanitation facilities. An estimated 80 person-months of international consulting and 1,581 person-months of national consulting expertise will be required. The outline terms of references for consulting service packages are in Supplementary Appendix I.

## 7. Advance Contracting

59. To expedite implementation, the Government requested advance action for the recruitment of consultants and procurement. Engagement of consultants is expected to advance up to the stage of technical proposal evaluation. The development of bidding documents for rehabilitation works in the four sample towns will also be initiated. The Government was informed that approval of advance contracting does not commit ADB to finance the Project.

<sup>29</sup> ADB. 1995. *Involuntary Resettlement*. Manila. Subprojects classified as category A will be rejected. Category A (significant) means 200 or more people will experience major impacts, which are defined as (i) being physically displaced from housing, or (ii) losing 10% or more of their productive assets (income generating) (ADB. 2003. *Operations Manual. Section F2/BP: Involuntary Resettlement*. Manila [29 October].) Category B or C will be accepted. Category B projects include involuntary resettlement impacts that are not deemed significant. No involuntary resettlement effects are foreseen in category C projects.

<sup>30</sup> Subprojects classified as category A will be rejected.

<sup>31</sup> Evaluation will be carried out by the Pourashava Performance Review Committee as defined in Appendix 7 in accordance with criteria set forth in Appendix 5.

<sup>32</sup> As this is a sector project, the procurement plan includes indicative procurement for the sample subproject towns. A procurement plan for each of the subprojects will be agreed to by ADB and the Government, and updated from time to time in accordance with ADB's *Procurement Guidelines*.

<sup>33</sup> Consultants' qualifications selection will be used for NGO contracts for community infrastructure development.

## 8. Anticorruption Policy

60. ADB's policies relating to anticorruption<sup>34</sup> and the combating of money laundering and financing of terrorism<sup>35</sup> were explained to and discussed with the Government. Consistent with its commitment to good governance, accountability, and transparency, ADB will require the Government to institute, maintain, and comply with internal procedures and controls following international best practice standards for the purpose of preventing corruption or money laundering activities or the financing of terrorism, and covenant with ADB to refrain from engaging in such activities. The investment documentation between ADB and the Government will allow ADB to investigate any violation or potential violation of these undertakings. In particular, all contracts financed by ADB in connection with the Project will include provisions specifying the right of ADB to audit and examine the records and accounts of DPHE and all contractors, suppliers, consultants, and other service providers as they relate to the Project.

61. The Project incorporates several other measures, in addition to the standard ADB requirements, to deter corruption and increase transparency. The Government will create a project website to disclose information about various project matters, including procurement. With regard to procurement, the website will include information on, among others, the list of participating bidders, name of the winning bidder, basic details on bidding procedures adopted, amount of contract awarded, and goods/services procured. In addition to the web-based disclosure, the TLCC, which include civil society and NGO representation, will be provided with detailed information on each PIU procurement in their respective pourashavas.

## 9. Disbursement Arrangements

62. Withdrawal of loan proceeds will be in accordance with ADB's *Loan Disbursement Handbook* (2001), as updated periodically and with arrangements between the Government and ADB. Imprest account and statement-of-expenditure procedures will be used. An imprest account will be established immediately following loan effectiveness at Bangladesh Bank. DPHE will manage the imprest account. The imprest account ceiling will be limited to 10% of the loan or the forecast expenditure for the next 6 months, whichever is lower. ADB's statement-of-expenditures procedures will be used to replenish and liquidate the imprest account for eligible expenditures not exceeding \$50,000 per payment. The Project's funds flow is explained in Appendix 10.

## 10. Accounting, Auditing, and Reporting

63. The Government, acting through DPHE, will maintain records and accounts to identify all goods and services financed by the loan proceeds. Each of the participating pourashavas will maintain similar records and submit annual accounts and financial statements to the PMU for further submission to ADB. The Government will ensure that accounts and financial statements are audited annually, in accordance with sound accounting principles, by independent external auditors acceptable to ADB. DPHE will provide ADB, not later than 6 months after the close of each fiscal year, certified copies of audited accounts and financial statements, and the report of the auditor on these. Imprest account and statement of expenditure records will be audited annually and a separate audit opinion will be provided for each.

64. The PMU will prepare quarterly progress reports and submit them to ADB and the Local Government Division within 20 days of the end of the applicable period. The reports will be prepared in a format acceptable to ADB and will include the following: (i) project progress in each pourashava, (ii) the status of institutional development activities, (iii) delays and problems encountered and actions taken to resolve them, (iv) compliance with loan covenants, and (v) expected progress during the next 6

<sup>34</sup> ADB. 1998. *Anticorruption*. Manila.

<sup>35</sup> ADB. 2003. *Enhancing the Asian Development Bank's Role in Combating Money Laundering and the Financing of Terrorism*. Manila.

months. Within 6 months of the Project's physical completion, the Government will prepare and submit to ADB a project completion report, including costs and compliance with loan covenants.

## **11. Project Performance Monitoring and Evaluation**

65. The PIU in each pourashava will be responsible for ensuring that a comprehensive program for PPME acceptable to ADB is carried out to (i) examine the Project's technical performance, (ii) evaluate the delivery of the planned facilities, (iii) assess the achievement of the Project's objectives, and (iv) measure the Project's social and economic benefits. A set of PPME indicators will be developed at the start of the Project by the PMU and consultants in consultation with the pourashavas. Indicators will include number of household water connections, number of public latrines constructed, number of participants in awareness campaigns, incidence of waterborne disease, volume of water produced, volume of unaccounted-for-water, and collection efficiency.

66. The PMU will conduct initial baseline physical and socioeconomic surveys and submit a detailed implementation plan for monitoring performance and for preparing benchmark information for ADB's review and concurrence within 6 months from loan effectiveness. Annual PPME reports will be prepared by each PIU, consolidated by the PMU and submitted to ADB throughout project implementation.

## **12. Project Review**

67. ADB and the Government will jointly review project progress at least twice a year. In addition to the regular reviews, ADB and the Government will undertake a comprehensive review at the end of the rehabilitation phase when phase 2 feasibility studies will be substantially completed. A midterm review will be undertaken within 36 months from loan effectiveness. These reviews will include a detailed evaluation of the project scope, implementation arrangements, and achievement of scheduled targets. They will assess progress on pourashava reform criteria compliance, institutional development, subproject implementation, and performance of consultants and DPHE.

# **IV. PROJECT BENEFITS, IMPACTS, ASSUMPTIONS, AND RISKS**

## **A. Poverty Reduction and Social Development**

### **1. Poverty Reduction**

68. Based on the assessment of four pourashavas during project preparation, 63% of the population does not have access to safe water supply and 41% do not have access to sanitary latrines. Access is even more limited for poor households, with 70% of poor households without access to safe water supply and 58% without access to sanitary latrines. In slum areas, where 70% of the poor in the four pourashavas are found, 81% have no access to safe water supply and 73% lack access to sanitary latrines.

69. The Project is expected to provide safe water supply and sanitation with emphasis on poor households, particularly households headed by women in slum and fringe areas. The Project specifically targets the poor in terms of the following components: shared standpipes, shared safe water points utilizing arsenic-free water sources, and community latrines and public toilets. Under the Project, 672 water standpipes and 360 safe water points are committed solely for use of the approximately 70% poor households in slum areas. These facilities, along with community latrines, will be directly managed and maintained by poor beneficiary households organized and trained by NGOs. Poverty impact analysis undertaken in four pourashavas suggests that 30% of beneficiaries for other project components comprise the poor. Improved safe water supply and sanitation services and increased awareness will reduce health costs, decrease malnutrition, and increase labor productivity—issues critical to reducing poverty. The summary poverty reduction and social strategy is in Appendix 11.

## 2. Participation

70. Participation is a key element of the Project, particularly in targeting vulnerable households and ensuring sustainability. In the communities, stakeholder participation in project planning and implementation will be through extensive information campaigns, and community organization and mobilization activities through NGOs and CBOs. Through community organization, water and sanitation user associations (including women's user groups) will be formed to ensure the sustainability of facilities.<sup>36</sup> An information and education campaign will be formulated based on identified needs. Skills development, training, and provision of linkages to institutions will also be undertaken as part of the Project to ensure participation.

## 3. Gender

71. Primary and secondary data were analyzed to assess the status of women in the four sample pourashavas. The assessment shows gender gaps in employment, income, education, household roles, and decision making. Parallel to this disparity, access to piped water supply and sanitary latrines by households headed by women is lower. Drinking water is largely sourced from HTWs, open wells, and ponds, putting households headed by women at higher risk of arsenic contamination and other waterborne diseases. Moreover, water collection, and water and sanitation management are traditionally female roles in the household and community. Thus, women are vulnerable to health risks due to deficiencies in water, hygiene, and sanitation. Their access to latrines and other sanitation facilities is often reduced by gender insensitivity to the construction and management of such facilities. A gender strategy ensures that gender issues are addressed, women benefit equally from the Project, and interventions avoid gender bias.<sup>37</sup> A gender action plan is in Appendix 12.

## B. Environment and Social Safeguards

### 1. Environment

72. DPHE has prepared initial environmental examinations (IEEs) for the four sample subprojects following ADB's *Environment Policy (2002)* and *Environmental Assessment Guidelines (2003)*. The IEEs show that the subprojects will result in substantial net environmental and public health benefits including (i) reduced risk of waterborne diseases from improved water supply through the provision of better access to safe and adequate water supply and from improved sanitation and hygiene; (ii) reduced risk of arsenic-related diseases particularly for households that currently use shallow tube wells that are likely to be contaminated with arsenic; (iii) reduced groundwater contamination and avoided sewage flow in drainage canals, ponds, and rivers; and (iv) increased social benefits from community development. The salient points of the IEEs including impacts and risks and mitigation measures are summarized in Supplementary Appendix J (the full IEE and subproject IEEs are in Supplementary Appendix K).

73. The Project will not generate any significant negative environmental impacts. Potential negative environmental impacts are mostly temporary and localized, and can be addressed through subproject design and mitigation measures. The subproject selection criteria rule out subprojects with significant environmental impacts. The IEEs contain environmental monitoring plans identifying monitoring

<sup>36</sup> In addition project participation will be promoted through (i) target beneficiary involvement in the choice of interventions appropriate for the community or household; (ii) site selection; (iii) participation in construction; (iv) provision of counterpart funds; (v) conduct of information, education, and awareness campaigns; (vi) implementation of community ordinances and/or sanctions on sanitation and hygiene from the O&M activities; (vii) planning and conduct of income enhancement activities; and (viii) monitoring and evaluation.

<sup>37</sup> Project design has taken into consideration group targeting strategies to identify (i) the location of vulnerable households headed by women, (ii) their mobilization and organization to participate in intervention formulation and implementation, and (iii) mechanisms to institutionalize and sustain their involvement. During project design, gender issues were identified and mitigation measures proposed and incorporated. The project design proposes that women be made primarily responsible for locating the site for construction of community standpipes and community latrines. Monitoring and evaluation systems will generate gender disaggregated information to enable tracking of the Project's gender impacts.

parameters and responsible agencies to ensure mitigation measures are properly undertaken. The IEEs conclude that no further assessment on environmental impacts is required for sample subprojects. To ensure compliance with the Government and ADB's environmental guidelines and requirements, environmental assessment and review procedures to guide the implementation of future subprojects were formulated (details in Supplementary Appendix K).

## **2. Involuntary Resettlement**

74. To ensure compliance with the Government and ADB's policy and requirements for involuntary resettlement, DPHE developed a resettlement framework to guide subproject implementation. A summary of the framework is in Appendix 13. DPHE prepared draft resettlement plans for the four sample subprojects following the Government's *Acquisition and Requisition of Immovable Property Ordinance* of 1982 (amended in 1993 and 1994), ADB's policy on involuntary resettlement (footnote 29), and the resettlement framework for the Project (Supplementary Appendix L). DPHE had endorsed the draft resettlement framework and draft resettlement plans for the sample subprojects, which are on the ADB website. The Project is designed to minimize land acquisition and resettlement impacts, and the subproject selection criteria do not allow subprojects with significant resettlement impacts. Careful subproject siting and alignment will further minimize impacts. Most new construction and rehabilitation will be undertaken on Government land or within the premises of existing facilities. In the four sample subprojects, permanent land acquisition required for overhead tanks, production wells, and treatment plants is 0.43 hectares affecting five households. Impacts due to the rehabilitation and construction of water supply networks will be temporary and minimal, as these will be undertaken on road shoulders and under roads if structures are on the shoulders.

## **3. Indigenous Peoples**

75. The Project provides social benefits by improving and expanding access to water supply and sanitation resulting in significant environmental and public health benefits in subproject pourashavas. Social assessments undertaken for sample subprojects do not indicate significant adverse impacts on vulnerable groups, and did not identify any indigenous groups. The 16 shortlisted pourashavas do not have significant indigenous populations. The resettlement framework and resettlement plans provide additional entitlements to vulnerable people affected, including households headed by indigenous people.

## **C. Economic and Financial Benefits**

### **1. Economic Benefits**

76. The economic rationale for Government intervention is sound as the Project supports only the pourashavas' service delivery operations (i.e., water supply and sanitation), which are all basic public services characterized by monopolistic conditions (for piped water supply schemes), externality management (for sanitation awareness campaign), and protection of public goods (for sanitation components). The goals of the SDP-WSSB are to (i) ensure that the basic minimum water supply and sanitation needs for all citizens is met by 2010, and upgrade the system beyond 2010; (ii) decentralize the service delivery mechanism to, and build capacity of, the local government institutions (e.g., pourashavas) for sustainability of investment and good governance; and (iii) implement the optimal service delivery options recommended by the SDP-WSSB including a PLC modality. These goals were widely accepted through a long-term sequence of development of WSS policies and strategies, and are consistent with the Millennium Development Goals and the PRS. The Project will assist the Government in achieving all three goals by improving water service delivery with rehabilitated and expanded piped water schemes and more deep HTWs, raising awareness of sanitation practices, constructing latrines in public places and poor communities, and supporting institutional capacity development of DPHE and PWSS in selected pourashavas. The participating pourashavas will be selected, based on criteria that ensure that (i) they require financial assistance to achieve the goals, and (ii) they are willing to commit to the reform actions to sustain the improved services. For the water supply schemes, the subproject selection criteria impose a cost ceiling per existing connection for the

first phase investment, a cost ceiling per new connection for the second phase investment, and an overall cost ceiling of \$3 million per pourashava for the second phase investment. It will ensure fair allocation of the available funds among the participating pourashavas. As the investment needs are much higher than the available funds, imposition of cost ceilings will automatically translate into the least cost options in engineering design.

77. The sanitation subsector has a target of achieving 100% nationwide coverage by 2010. Accordingly, the Government prepared a national sanitation strategy to accelerate accomplishment of this target. The Project assists the pourashavas to achieve 100% sanitary latrine coverage. Since the strategy states that a subsidy should only be applied for the poor, and low cost latrines can be easily purchased in the local market, the Project will not provide any investment support to individual household latrine construction. Rather, the Project provides for an awareness campaign to raise the effective demand in the general public for sanitary latrines as well as construction of community, school, and public latrines.

78. The Project will bring substantial economic benefits, including the (i) value of nonincremental water supply; (ii) value of incremental water supply; (iii) avoided cost of diarrhea and dysentery, which are prevalent diseases in pourashavas; and (iv) avoided loss of productivity/income due to a reduction in morbidity rate. Since about 70–94% of the pourashava population depend on nonpiped water to satisfy everyday needs, the amount of nonincremental water supply is significant. The economic value of the nonincremental water supply, computed as costs of fetching and treating water from other sources, is also high at Tk29.3 (Brahmanbaria), Tk27.7 (Jessore), Tk31.3 (Pirojpur), and Tk25.5 (Sirajganj) per cubic meter. The medical cost burden in a case of falling ill with diarrhea or dysentery is Tk200–Tk2,000 per incidence. The economic analysis is in Supplementary Appendix M.

## **2. Financial Benefits**

79. The participating pourashavas will borrow only for piped water schemes. They will need to generate enough cash to sustain the piped water systems without a transfer from the other pourashava budgets, and to pay O&M costs, depreciation, and debt service. The tariff revision schedule should be prepared to demonstrate sufficient cash flow over 20 years; implementation of the first tariff revision is part of the entry criteria to the second phase of the Project. Other investment costs, including community water schemes (e.g., deep HTWs) and sanitation, are provided as a grant from the Government to the pourashavas. The O&M responsibilities and costs will be transferred to each community for deep HTWs, public standpipes, and community toilets; to each school for school toilets; and to private operators for public toilets. The pourashavas are also responsible for O&M of sludge removal trucks purchased under the Project.

80. The financial management capacity of the PWSS or PLC of the participating pourashavas will be significantly improved through consultancy services and training provided under the Project. At a minimum, the PWSS should operate in a financially autonomous manner (its financial account is currently not separate from the other pourashava budget). If a pourashava chooses to establish a PLC, its autonomy will be strengthened and more securely guaranteed along with stronger financial discipline. Hence, establishment of a PLC is highly encouraged under the Project, which will also provide incentives. If the pourashavas are successful in operating the PLCs as envisaged, their financial strength will allow them to expand the system at their own cost or in partnership with private investors/operators.

81. Financial projections for piped water supply schemes in four sample pourashavas were made to examine the financial viability given the proposed tariff revision schedule. The financial internal rates of return of three of the four water supply schemes are estimated to be higher than the weighted average cost of capital, ranging from –0.27% (Jessore) to 16.22% (Sirajganji). The financial analysis is in Supplementary Appendix N.

## **D. Major Risks and Safeguards**

82. The Project has two primary risks. The first is lack of public support to implement reforms, including tariff changes. The Project will address this risk by requiring most reforms to be implemented in phase 1, and requiring such implementation to be complete for a pourashava to qualify for larger investments in phase 2.<sup>38</sup> The process of reform will be supported through aggressive public awareness campaigns as well as training and capacity building. Required reforms will be clearly spelled out in all project agreements as well, and the selection process will exclude pourashavas that do not commit to change. Another primary risk is resistance from the central Government to allow greater autonomy to pourashavas to operate their water utilities by adopting a PLC operational model and recruiting new staff. This risk has been addressed by supporting the adoption of a PLC management structure as an optional reform, rather than a mandatory one, synchronizing efforts with other external agencies in the sector, and providing partial financing for incremental staff during project implementation.

83. Other risks to the Project include (i) substantial delays in project start-up due to delays in staffing the PMU and PIUs, (ii) the fact that this is the first sector loan project to be implemented by DPHE, (iii) inadequate capacity of the pourashavas in project implementation, (iv) noncompliance with agreements and understandings reached during Project design and formulation, and (v) possible corruption. These risks will be addressed through (i) gaining assurances from the Local Government Division and DPHE that the PMU will be staffed as soon as possible, and will begin initial project activities well before loan effectiveness; (ii) providing substantial consulting support to DPHE and the pourashavas for project management and implementation; (iii) creating and involving TLCC, NGOs, and CBOs to ensure broader local support for and commitment to project agreements and assurances; and (iv) requiring external audits of project accounts, minimizing the number of contracts/procurements, establishing a procurement disclosure website, and closely involving the TLCC in all project aspects to add significant transparency to project processes. Further information on assessed risks and mitigating measures incorporated in the Project are in Supplementary Appendix O.

## **V. ASSURANCES**

### **A. Specific Assurances**

84. In addition to the standard assurances, the Government has given the following assurances, which are incorporated in the legal documents:

- (i) The Government will provide counterpart funds for project implementation on time. The Government will make timely submission of annual budgetary appropriation requests and ensure prompt disbursement of appropriated funds during each year of project implementation.
- (ii) Not later than 18 months after the loan effective date, the Government will have established and institutionalized a human resources development center and/or a training center at DPHE and all key staff will have been appointed.
- (iii) The Government and DPHE will ensure that subprojects will be selected and carried out in accordance with agreed subproject selection criteria as set out in Appendix 5 of this report.
- (iv) The Government will ensure that only pourashavas that have successfully managed phase 1 and meet the defined set of performance criteria are eligible to receive financial support for phase 2. Pourashavas that fail to meet all criteria by the end of phase 1 will be given a 6-month grace period to improve their performance. Pourashavas that fail to demonstrate their commitment to reforms and the sustainability of their water supply systems will not receive funding for phase 2.

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<sup>38</sup> Sustainability of the pourashava utilities (with or without any new investment) is heavily dependent on the institutionalization of the proposed reforms. Therefore, in principle, ADB/the Government should reward towns that demonstrate commitment to reforms and long-term sustainability, and not provide phase 2 funding to towns that do not.

- (v) The Government will enter into a subproject agreement and a subsidiary loan agreement with each participating pourashava, on terms and conditions satisfactory to ADB.
- (vi) The Government will cause each of the participating pourashavas to adopt a tariff reform plan and before the end of phase 1 the pourashava will implement the first major tariff revision. Fulfillment of this requirement will be a prerequisite for the pourashavas to qualify for inclusion in phase 2. Each pourashava will have fully metered piped water supply systems in the project towns and will carry out an aggressive public awareness campaign on the need for metering and tariff charges.
- (vii) The Government and DPHE will ensure that it will not approve any subproject that involves significant involuntary resettlement according to ADB's *Policy on Involuntary Resettlement* (1995). The Government will further ensure that all land and right-of-way required for the Project will be made available in a timely manner and adequate compensations will be paid to affected people prior to any civil works contract's award. Any involuntary resettlement will be carried out in accordance with the resettlement framework agreed between the Government and ADB, and ADB's policy on involuntary resettlement.<sup>39</sup> A resettlement plan will be prepared for each subproject involving land acquisition or resettlement and will be submitted to ADB for review and approval prior to any related civil works contract's award. The Resettlement Plans, that have been prepared and agreed between the Government and ADB, for the four sample subprojects, will be updated and provided to ADB for review and approval following detailed design and prior to civil work contracts' award. Draft resettlement plans and draft updated resettlement plans will be disclosed to people affected prior to submission to ADB for review and approval.
- (viii) To ensure that women benefit equally from the Project and interventions avoid gender bias, the Government and DPHE will ensure that the Project will be carried out in accordance with ADB's policy on gender and development<sup>40</sup> and the gender strategy contained in the gender action plan that has been prepared and agreed between the Government and ADB.
- (ix) The Government will ensure that it will not approve any subproject that involves significant environmental impacts according to ADB's *Environment Policy* (2002). The design, construction, operation, and implementation of all subproject facilities will be carried out in accordance with the environmental assessment and review procedures, and IEEs for sample subprojects agreed to between the Government and ADB; and complies with the Government's environmental laws and regulations and ADB's *Environment Policy* (2002). Any adverse environmental impacts arising from the construction, operation, and implementation of subproject facilities will be minimized by implementing the environmental mitigation and management measures, and other recommendations specified in environmental assessment reports. The Government will ensure the satisfactory preparation and implementation of the asbestos management plan and other safety plans, and that qualified and competent personnel will be recruited to carry out the work. The Government will ensure environmental requirements will be incorporated in bidding documents and civil works contracts.
- (x) Although the Project does not envisage any adverse impact on indigenous peoples, the Government and DPHE will ensure the subprojects will be prepared and implemented in accordance with ADB's policy on indigenous peoples,<sup>41</sup> in order to increase the quality and access of water supply and sanitation received by indigenous peoples.
- (xi) The Government will cause each of the participating pourashavas to carry out a PPME program. The PIU in each pourashava will be responsible for ensuring that a comprehensive program for PPME acceptable to ADB is carried out to (a) examine the Project's technical performance, (b) evaluate the delivery of the planned facilities, (c)

<sup>39</sup> ADB. 1995. *Involuntary Resettlement*. Manila.

<sup>40</sup> ADB. 2003. *Gender and Development*. Manila.

<sup>41</sup> ADB. 1998. *The Bank's Policy on Indigenous Peoples*. Manila.

- assess the achievement of the Project's objectives, and (d) measure the Project's social and economic benefits.
- (xii) Not later than 6 months after the loan effective date, the PMU will conduct initial baseline physical and socioeconomic surveys and submit a detailed implementation plan for monitoring performance and for preparing benchmark information to ADB for review and concurrence. Throughout project implementation, annual PPME reports will be prepared by each PIU, consolidated by the PMU, and submitted to ADB.

## **B. Conditions for Loan Effectiveness**

85. Prior to loan effectiveness, the following will have been completed:
- (i) The Government will have established a PMU within DPHE, and will have appointed a project director together with all the agreed key technical and accounts and finance staff.
  - (ii) The Government will have established a project steering committee, and will have appointed the secretary of the Local Government Division as the chair, and its members the chief engineer of DPHE and the project director of PMU; representatives from the Bangladesh Telephone and Telegraph Board, Economic Relations Division, Finance Division of the Ministry of Finance, Local Government Engineering Department, Ministry of Environment, Ministry of Health and Family Welfare, Planning Commission, Power Development Board, Urban Management Support Unit, and the pourashavas' chairpersons.
  - (iii) A draft subproject agreement and a draft subsidiary loan agreement, in the form and substance acceptable to ADB, will be submitted to ADB.

## **VI. RECOMMENDATION**

86. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve:

- (i) the loan in various currencies equivalent to Special Drawing Rights 27,588,000 to the People's Republic of Bangladesh for the Secondary Towns Water Supply and Sanitation Sector Project, from ADB's Special Funds resources, with an interest charge at the rate of 1.0% per annum during the grace period and 1.5% per annum thereafter, a term of 32 years, including a grace period of 8 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft Loan Agreement presented to the Board; and
- (ii) the administration by ADB of a loan not exceeding \$9,000,000 to the People's Republic of Bangladesh for the Secondary Towns Water Supply and Sanitation Sector Project to be provided by OPEC Fund for International Development (OFID) under the terms of a Letter of Administration to be entered into between ADB and OFID.

Haruhiko Kuroda  
President

21 September 2006

## DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/ Indicators	Data Sources/ Reporting Mechanisms	Assumptions and Risks
<p><b>Impact</b></p> <ul style="list-style-type: none"> <li>• Improve living conditions and health standards in participating secondary towns.</li> <li>• Improve sustainability and efficiency of pourashava water utilities.</li> </ul>	<ul style="list-style-type: none"> <li>• People perceive an improved quality of life</li> <li>• Mortality and morbidity rates from diarrhea, dysentery, and other waterborne diseases reduced</li> <li>• Tariff and institutional reforms adopted and financial performance of PWSSs improved in 16 pourashavas</li> </ul>	<ul style="list-style-type: none"> <li>• PPME reports</li> <li>• ADB mission reports</li> <li>• National economic statistics</li> <li>• Bangladesh Bureau of Statistics reports</li> <li>• Pourashava health statistics</li> </ul>	<p><b>Assumption</b></p> <ul style="list-style-type: none"> <li>• Financial, human, and other resources required by the Project are adequate and provided on time.</li> </ul> <p><b>Risk</b></p> <ul style="list-style-type: none"> <li>• Secondary towns may lack political will to implement the investments and reforms diligently.</li> </ul>
<p><b>Outcome<sup>a</sup></b></p> <ul style="list-style-type: none"> <li>• Increased quantity and improved quality of water supply in project towns (contribute to achievement of the targets of Millennium Development Goal 7)</li> <li>• Improved community awareness of the link between proper hygiene, sanitation, and health, particularly among women and children</li> <li>• Increased sanitation coverage</li> <li>• Improved capacity of secondary towns to implement, operate, manage, and maintain water supply and sanitation investments</li> <li>• Improved capacity of DPHE to plan, design, supervise, monitor, and provide technical assistance to local water utilities</li> <li>• Management options consistent with the SDP-WSSB (PLC entity, outsourcing billing and collection) pushed forward and piloted</li> </ul>	<ul style="list-style-type: none"> <li>• 158,800 households with access to safe water through piped household connections or public water points</li> <li>• Volume of safe water produced and billed to existing and new customers increased</li> <li>• All school children and over 40% of adults in each pourashava participated in the hygiene education and sanitation promotion programs</li> <li>• Number of households using sanitary latrines increased by 25%</li> <li>• Financial performance of PWSS significantly improved</li> <li>• More than 500 DPHE and pourashava staff trained on various aspects of water supply and sanitation</li> <li>• About 5 pourashavas opt to pursue new (PLC) institutional models</li> </ul>	<ul style="list-style-type: none"> <li>• PPME reports</li> <li>• Training reports</li> <li>• ADB mission reports</li> <li>• PWSS financial statements</li> <li>• Project completion report (PCR)</li> <li>• Government and external agency reports on the WSS sector</li> </ul>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Households will connect to the water supply system because water quality is better and supply is more reliable compared with the existing situation.</li> <li>• Key water utility and sanitation personnel with appropriate qualifications are appointed on time.</li> <li>• Only qualified, permanent staff with direct responsibilities in the water supply and sanitation sector are trained.</li> <li>• The pourashavas will adopt revised tariff structures and improve collection efficiency.</li> <li>• The Government is committed to the institutional reforms (in particular the PLC model for local utilities) and does not block pourashavas from pursuing this option.</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>• The central and community governments lack the political will to adopt reforms.</li> <li>• Delays occur in recruitment and appointment of key staff.</li> <li>• Collection efficiency is poor.</li> </ul>
<p><b>Outputs<sup>a</sup></b></p> <p><b>Part A. Water Supply Improvements</b></p> <ul style="list-style-type: none"> <li>• Rehabilitation, expansion, and completion of metering of existing piped water supply systems</li> </ul>	<p>Phase 1: Rehabilitation</p> <ul style="list-style-type: none"> <li>• 172 km of water mains rehabilitated</li> <li>• 8 iron removal/surface water treatment plant plants with 300 cubic</li> </ul>	<ul style="list-style-type: none"> <li>• Detailed subproject appraisals/engineering designs</li> <li>• Construction</li> </ul>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Recruitment/mobilization of all consultants, contractors, and nongovernment organizations is timely.</li> <li>• Required land and rights-of-way are procured without significant delays, in</li> </ul>

Design Summary	Performance Targets/ Indicators	Data Sources/ Reporting Mechanisms	Assumptions and Risks
<ul style="list-style-type: none"> <li>• Number of metered household connections maximized</li> <li>• Shared standpipes and other safe water points provided to areas that cannot be provided with household connections efficiently</li> </ul>	<p>meters (m<sup>3</sup>)/hour (hr) capacity rehabilitated</p> <ul style="list-style-type: none"> <li>• 29 overhead tanks with 680 m<sup>3</sup> capacity rehabilitated</li> <li>• 53 production tube wells regenerated</li> <li>• 250 km of distribution mains replaced</li> <li>• 68,000 existing household connections metered</li> </ul> <p>Phase 2: System Expansion</p> <ul style="list-style-type: none"> <li>• 67 production tube wells installed</li> <li>• 9 new iron removal plants/surface water treatment plant with 300 m<sup>3</sup> capacity operational</li> <li>• 18 new overhead tanks with 680 m<sup>3</sup> capacity operational.</li> <li>• 600 km of distribution mains of various diameters installed</li> <li>• 40 km of new transmission mains installed</li> <li>• 64,500 water meters installed</li> <li>• 583 new standpipes for poor households operational</li> <li>• 732 new safe water points constructed</li> <li>• 1,315 community water supply user groups organized and/trained</li> </ul>	<p>progress reports</p> <ul style="list-style-type: none"> <li>• PPME reports</li> <li>• PMU reports</li> <li>• ADB mission reports</li> <li>• PCR</li> </ul>	<p>accordance with all ADB and Government guidelines.</p> <ul style="list-style-type: none"> <li>• Necessary approvals/issuance of environmental clearance and other permits are secured from appropriate government agencies on time.</li> <li>• Civil works contractors perform in accordance with approved schedules and guidelines.</li> <li>• Counterpart funds are made available on time.</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>• Construction is delayed due to problems of land/right-of-way acquisition and force majeure.</li> <li>• Delays and disputes in finalizing contracts result from corruption and weak capacity.</li> <li>• Some pourashavas may not enter into phase 2 because of poor performance, and unwillingness to implement reforms, including tariff increases.</li> </ul>
<p><b>Part B: Sanitation Improvements</b></p> <ul style="list-style-type: none"> <li>• Community, school, public sanitation improvements</li> <li>• Sanitation awareness and promotion, hygiene education, capacity building</li> <li>• Septic-tank sludge removal/management</li> </ul>	<ul style="list-style-type: none"> <li>• Number of community, school, and public sanitary latrines constructed</li> <li>• Number of community sanitation user groups organized and/trained, and their gender mix</li> <li>• Number of adults and children participating in sanitation awareness and promotion, and hygiene education program, disaggregated by gender</li> <li>• Increased demand for sanitary latrine hardware and construction</li> <li>• Sludge removal equipment and sludge composting/disposal facilities utilized in line with project guidelines</li> </ul>	<ul style="list-style-type: none"> <li>• Detailed subproject appraisals</li> <li>• PPME reports</li> <li>• ADB mission reports</li> <li>• PCR</li> <li>• Government and external agency reports on sanitation improvement</li> </ul>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Recruitment/mobilization of consultants, contractors, and nongovernment organizations is timely.</li> <li>• School administrations, market and terminal associations, and communities will be willing to maintain public latrines.</li> </ul> <p><b>Risk</b></p> <ul style="list-style-type: none"> <li>• Participation in the sanitation awareness program is low.</li> </ul>



<p><b>Activities with Milestones</b></p> <ul style="list-style-type: none"> <li>• PMU established and fully staffed, and project steering committee established immediately after loan signing</li> <li>• Subproject agreements with DPHE for four sample towns signed upon loan effectiveness</li> <li>• Preparation of initial feasibility studies for additional towns completed by month 4, and additional subproject agreements signed</li> <li>• Project implementation units established immediately upon signing of the subproject agreements</li> <li>• Detailed design for rehabilitation works completed by end of month 6</li> <li>• Subsidiary loan agreements for phase 1 signed by month 7</li> <li>• Completion of water supply system rehabilitation by end of month 24</li> <li>• Detailed design work for all phase 2 activities completed by end of month 24</li> <li>• Phase 1 performance evaluated, and phase 2 eligibility decided by month 24</li> <li>• Subsidiary loan agreements for phase 2 signed by month 26</li> <li>• Civil works for water supply improvements completed by month 60</li> <li>• Consumer awareness program completed by month 24</li> <li>• Sanitation awareness program and sanitation improvements complete by month 36</li> </ul>	<p><b>Inputs</b></p> <p>ADB: \$41 million          OFID Fund: \$9 million          Government: \$20.5 million          Community: \$ 0.6 million</p>
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ADB = Asian Development Bank, DPHE = Department of Public Health Engineering, km = kilometer, m<sup>3</sup> = cubic meter, PCR = project completion report, PLC = public limited company, PMU = project monitoring unit, PPME = project performance management and evaluation, PWSS = pourashava water supply section, SDP-WSSB = Sector Development Programme—Water and Sanitation Sector in Bangladesh, WSS = water supply and sanitation.

<sup>a</sup> As this is a sector project, all numbers provided in the outcome and outputs sections of the framework are estimates based on the sample towns and may change based on detailed design. The estimates assume that participation in phase 2 will not be 100%.

## SECTOR ANALYSIS

### A. Assessment of the Urban Water and Sanitation Sector

1. **Existing Situation.** Water service coverage in the urban area is 72%, of which 39% is served by piped water supply systems through household connections and public taps; and 33% is served by hand tube wells. Average coverage in urban areas is low, but varies enormously from town to town, from almost nil to as high as 95%. Of the total 298 pourashavas, only 102 have piped water supply. Water supply operation in the pourashavas in general is characterized by (i) limited service hours up to 12 hours per day (average 9 hours per day), (ii) average unaccounted-for water of 33%, (iii) low billing and collection rates, and (iv) low and flat rates of tariffs. Urban sanitation is also a major challenge: 26% of urban households have no latrines or use unhygienic ones. High-density urban areas require different approaches. Conventional sewer systems are absent in all urban areas except Dhaka, where 20% of the population are served by a highly expensive sewer network.

2. **Present Delivery System.** Urban water supply and sanitation (WSS) services are carried out by water supply and sewerage authorities (WASAs) (Dhaka and Chittagong), city corporations, and pourashava water supply sections (PWSSs). The Department of Public Health Engineering (DPHE) implements new water supply systems and carries out major rehabilitation programs except in the areas managed by the WASAs. After completion of the works, DPHE gives the WSS systems to local government institutions (LGIs) for operation and maintenance (O&M). In reality, the local DPHE offices also assist the PWSSs with O&M if necessary and possible. The shortcomings in the present service delivery situation are (i) absence of demand management; (ii) inadequate cost recovery; (iii) inefficient service provision; and (iv) lack of autonomy, especially in tariff setting and staffing. The last factor is considered the major constraint in service provision, related to this is local external influence.

### B. Overview of Current Policies and Strategies for the Urban WSS Sector

3. Eight national policies and strategies govern the WSS sector. The National Policy for Safe Water Supply & Sanitation (WSS policy, 1998) is the most significant policy for the sector, emphasizing user participation, decentralizing to LGIs and community-based organizations (CBOs), and involving nongovernment organizations (NGOs) and the private sector in service delivery. Subsequently, the Sector Development Framework (2004), National Sanitation Strategy (2005), and Pro-Poor Strategy (2005) were formulated to further define and complement the WSS policy. The National Policy of Arsenic Mitigation (2004) was formulated specifically to address the widespread arsenic contamination of groundwater. On the other hand, the National Water Policy (1998) and the National Water Management Plan (2004) give broad direction for water resources management. The poverty reduction strategy (2005) recognizes the importance of water and sanitation as a means of achieving accelerated poverty reduction in the country. In addition, Bangladesh is committed to achieving the targets of the Millennium Development Goals.

4. The existing policies and strategies in general address the outstanding issues in the sector. However, policy gaps include (i) policies are not usually followed by a concrete time frame, financial allocations, and government directives, resulting in implementation difficulties; (ii) the targets set in several policies are not comprehensive, and are often too ambitious in the context of prevailing sector capacity and financial requirements; (iii) the institutional arrangements between the national government agencies (DPHE and Local Government Engineering Department) and the LGIs are not clearly defined, and decentralization modalities for the LGIs are not developed;

and (iv) the requirement of a regulating authority for the WSS sector is not mentioned in any policy despite the urgent need.

5. To address these outstanding concerns, the Government recently developed and approved the Sector Development Programme—Water Supply and Sanitation Sector in Bangladesh (SDP-WSSB), through a process of extensive stakeholder consultation. The SDP-WSSB is a comprehensive government initiative that makes recommendations to address policy gaps and reinforce policies, and sets out a strategy to help implement the policies.

### **C. Sector Development Programme—Water and Sanitation Sector**

6. The SDP-WSSB was prepared to compile the spirit of different relevant policies, strategies, and national and international commitments; and to develop a 10 year framework for development and cooperation in the WSS sector. Within this broader objective, the specific objectives are to (i) ensure that the basic minimum needs related to the water and sanitation services for all citizens, especially that of the poor, are met by 2010, and upgrade the service levels after 2010; (ii) decentralize the service delivery mechanism and build the capacity of the LGIs for sustainability of investments and good governance; (iii) recommend optimal service delivery options including a public limited company (PLC) model for the urban WSS subsector; (iv) propose a transitional plan to realize sector reform and sector capacity building; and (v) outline a sector investment plan to fulfill the sector targets, sector reforms, and capacity-building needs. The study was carried out in close consultation with the Local Government Division, its line agencies (i.e., DPHE, WASAs, and Local Government Engineering Department), LGIs, private service providers, NGOs, and the general public. The SDP-WSSB mainly consists of five sections: (i) an overview of the current policies and strategies for the WSS sector; (ii) an assessment of the present situation, coverage, technology options, and proposed service delivery systems for the rural WSS subsector; (iii) assessment, options, and proposals for the urban WSS subsector; (iv) the reforms and capacity-building plan; and (v) the sector investment plan (SIP). This appendix summarizes some of the key elements of the SDP-WSSB. The full SDP-WSSB is Supplementary Appendix A.

#### **1. Recommended Service Delivery Models**

7. Five basic models of water supply company organization are to be considered under the SDP-WSSB: public utility, corporate utility, public-owned private limited company (public-PLC), delegated private utility, and direct private utility. The first two models are in fact public agencies that remain within the domain of public law and, as such, are constrained in management flexibility. The second three models are fundamentally different as they are incorporated under the company law. The currently prevailing model in pourashavas is a public utility with very little autonomy, where even a separate financial budget does not exist and its operation is subject to political interference. Two WASAs are corporate utilities set up by the special acts. The public-PLC model is a highly recommended option, as it uses the company law as a buffer, shielding the water services business from the public sector rules and regulations.<sup>1</sup> Delegated private utility and private utility involve different levels of Public Private Partnership (PPP). However, while there is a potential for private sector investments in the WSS operation, Bangladesh needs more work to create an enabling environment. For example, an independent regulatory body should be set up, tariff structures should be rationalized, and political risks should be minimized.

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<sup>1</sup> More discussion is found in Supplementary Appendix H.

8. A regional utility may be formed when a number of neighboring towns together form a larger utility to gain the benefits of economy of scale, financial opportunities, and skill improvements. This is a recommended long-term outcome, especially for small- and medium-sized towns. Ultimately, water supply and sanitation services in Bangladesh could readily be consolidated into 27 areas all with urban population in the range of 268,000–921,000. Such changes would need to be implemented with the appropriate legal and regulatory framework supported by considerable socioeconomic and public awareness activities.

9. To transform the current models into recommended delivery models, an institutional framework is needed for the urban sector regulatory regime. Policy, regulation, and service delivery must be clearly separated and each should be assigned to a different entity. The central Government departments continue to be responsible for policy development. The water regulatory commission to be established as an independent body will be responsible for regulating, fixing applicable service standards, setting tariffs, monitoring utility performance, and enforcing compliance. WSS utilities are responsible for providing water and sanitation services. The municipalities own the assets, and consult with central Government departments and the water regulatory commission.

## 2. Reforms and Capacity-Building Plans

10. Sector capacity building and reforms are required for the transition from the current to the future envisaged scenario. The strategy for capacity development is to make interventions at three strategic levels: institutional development (task allocation among the sector organizations), organizational development (changes in internal arrangements of the particular organization), and human resources development (staffing requirement and training needs).

11. **Institutional Development.** In urban areas, establishing public-PLCs, or regional utilities in the long term, and setting up a regulatory framework are recommended. During the transition, the process can be started by setting up autonomous WSS utilities under the municipality and city corporations. A comprehensive water services act should be enacted, and then, the water regulatory commission should be brought into action. DPHE needs to change its role from an implementer to a leader and coordinator of sector development as well as a quality technical assistance provider. DPHE should focus more on the urban sector and transfer responsibilities for the conventional rural WSS development to the union parishads.<sup>2</sup> A national human resources development center for WSS and a national water supply and sanitation information center will be established under DPHE to institutionalize human resources development and information management of the WSS sector.

12. **Organizational Development.** In the urban subsector, autonomous WSS utilities need to be developed; and at the central level, DPHE needs to be developed as the main sector agency. Whichever delivery model is chosen for a particular urban area, all the organizational models are essentially for utilities that are more autonomous with adequate staff skills and work procedures. During the transitional phase, DPHE should provide WSS utilities and union parishads with support in implementing their reforms. At the same time, DPHE itself will require capacity-building infrastructure including a human resources development center, and a restructuring of its staff.

13. **Human Resource Development.** Training is required for union parishad staff, the autonomous WSS utilities, and DPHE to take up new responsibilities and perform their functions efficiently. For the urban WSS utilities, the training needs are estimated at \$7.92 million. A national training program to address the training needs should be taken up in the transition period.

<sup>2</sup> Union parishads is the lowest level of elected government in rural areas composed of groups of religious or unions.

### 3. Sector Investment Plan

14. The SIP estimates the investment requirement in the sector for the next 10 years, at about \$5 billion. The SIP comprises a rural investment plan (rural water and rural sanitation) and an urban investment plan (urban water and sanitation). A scenario approach was followed for each of the subsectors to calculate the investment requirement. For all the scenarios, the goals are the same: 100% coverage of safe water supply at the basic minimum level and 100% coverage of sanitation by 2010, then gradual improvements of services after 2010. However, each scenario assumes different growth rates of coverage by technology and different ultimate service levels in 2025. For urban water supply, the technologies considered are household connections, yard taps, public taps, slum water points, water bowsers, and public tube wells in a decreasing order of the service level; four scenarios were considered. The SDP-WSSB chooses the least cost scenario (\$1,069 million over 10 years) with a moderate coverage increase and moderate service level in 2025. For urban sanitation, the technologies considered are public toilets, latrines, septic tanks, eco-sanitation, small-bore sewers, and sewer system; three scenarios were considered. The SDP-WSSB again chooses the least cost scenario (\$2,427 million over 10 years). The summary of the SIP and the financing plan is in Supplementary Appendix M.

15. The annual investment requirement under Annual Development Programme allocations (Government and funding agencies) will be about five times higher than the present level. Urban water supply will need major reforms and high investments. If its reforms and capacity-building plans are implemented successfully, the subsector should start generating money; this would encourage the Government, funding agencies, and eventually the private sector to invest more. Urban sanitation has the largest investment requirement at about a half of the total sector investment requirement over 10 years; the sewer system is expensive. In view of difficulties in securing finance for urban sanitation, an alternative plan was developed to cover the entire urban areas by latrine sanitation by 2010. It will cost \$15.99 million from 2005–2010, much lower than \$1,082 million required in the original plan.

#### D. Conclusions

16. The SDP-WSSB is a holistic plan for Bangladesh's WSS sector to meet its future requirements and the aspirations of the general public. As required by the poverty reduction strategy, the Ministry of Local Government, Rural Development, and Cooperatives communicated to the Planning Commission that the SIP will constitute a medium-term expenditure framework for the sector. The Local Government Division has decided to set up a policy support unit to ensure all stakeholders reach a consensus on various components of the SDP-WSSB and that a sector approach is developed with funding agency harmonization and sector coordination.

17. The investment requirement of the SIP is substantially higher than the present funding. Compared with the other regional countries, the percentage of the total development budget allocated by government in the sector is low. Moreover, the percentage of total allocation decreased in recent years. Because the SDP-WSSB is owned by the Government and other sector partners, political commitment is strong; thus mobilizing the required financial resources for the sector should be feasible. The SDP-WSSB forms a solid basis for an Asian Development Bank sector investment.

## EXTERNAL ASSISTANCE TO THE WATER SUPPLY AND SANITATION SECTOR

Name of Project	Executing Agency	Amount (\$ million)	Approved/Implementation Period
<b>A. Asian Development Bank (ADB)</b>			
1. District Towns Water Supply Project	DPHE, Gov	14.40	1982
2. Second Water Supply and Sanitation Project	DPHE, Gov	31.00	1994–2002
<b>B. World Bank/IDA</b>			
1. Bangladesh Arsenic Mitigation Water Supply Project	DPHE, Gov	22.08	1998–2005
2. Bangladesh Water Supply Program Project	DPHE, Gov	35.69	2004–2010
<b>C. Danida</b>			
1. Water Supply, Sanitation, Drainage and Waste Management Project at Pourashava, Thana, and Growth Center	DPHE, Gov	22.85	1996–2005
2. Rural Water Supply and Sanitation Project at Coastal Belt.	DPHE, Gov	12.64	1999–2005
3. Gov-Danida Arsenic Mitigation Project	DPHE, Gov	6.66	2001–2005
<b>D. UNICEF</b>			
1. Social Mobilization for Sanitation	DPHE, Gov	2.85	1993–1998
2. Environmental Sanitation, Hygiene and Water Supply in Rural Areas of Bangladesh	DPHE, Gov	20.06	1996–2005
3. Study on Arsenic Affected Area of Bangladesh	DPHE, Gov	0.19	1996–2000
4. Environmental Sanitation, Hygiene and Water Supply Project in Slum Areas	DPHE, Gov	2.42	1997–2005
5. WS Rehabilitation Project for the Flood-Affected People in 2004	DPHE, Gov	5.86	2005–2006
6. Sanitation Health Education and Water Supply Project	DPHE, Gov	65.83	2006–2010
7. Action Research on Community Based Arsenic Mitigation in 15 Upazila Projects	DPHE, Gov	2.11	2001–2005
<b>E. JICA</b>			
1. Establishment of DPHE Central Laboratory for Strengthening Water Supply Examination System	DPHE, Gov	4.19	2004–2006
2. Study on Groundwater Development of Deep Aquifers for Safe Drinking Water Supply to Arsenic Affected Area in Western Bangladesh	DPHE, Gov	3.79	2000–2001
<b>F. Netherlands</b>			
1. Water Supply, Sanitation, and Drainage Project in 18 Districts	DPHE, Gov	18.58	1978–1999
2. Char Development and Settlement Project-2	DPHE, Gov	0.5	1999–2005
<b>G. IDB</b>			
1. Water Supply Project at Coastal Belt (second phase)	DPHE, Gov	7.64	2003–2006
2. Water Supply Project at Coastal Belt (first phase)	DPHE, Gov	8.13	1998–2003
<b>H. DFID</b>			
1. TA Project for Research on Arsenic-Affected Groundwater of Bangladesh	DPHE, Gov	0.57	1997–2000

ADB = Asian Development Bank, Danida = Danish International Development Assistance, DFID = Department for International Development, DPHE = Department of Public Health Engineering, Gov = Government of Bangladesh, IDB = Inter-American Development Bank, JICA = Japan International Cooperation Agency, UNICEF = United Nations Children's Fund.

Note: Conversion rate used for projects other than ADB: Tk65 = \$1.

Sources: DPHE and ADB.

### LESSONS LEARNED AND INCORPORATED IN THE PROJECT

Experience and/or Lesson	Incorporation In Project Design
<ul style="list-style-type: none"> <li>• Covenants did not include any enforceable milestone to result in specified actions to be taken if covenants were not met</li> </ul>	<ul style="list-style-type: none"> <li>• Two-phased loan effectiveness requirements are based on entry and rehabilitation (phase 1) followed by new works (phase 2) only upon satisfaction of qualifying performance criteria.</li> </ul>
<ul style="list-style-type: none"> <li>• PWWS financial performance requires immediate improvement and strengthening</li> <li>• Non-implementation of required tariff adjustments threatened financial sustainability of previous projects</li> </ul>	<ul style="list-style-type: none"> <li>• Phase 1 works are geared to high impact, high revenue improvements that will allow the pourashavas to raise tariffs and enforce collection based on improved quantity and quality of water service provided.</li> </ul>
<ul style="list-style-type: none"> <li>• Autonomy of water supply entity is essential in (i) setting water tariffs to meet financial needs, and in (ii) appointing adequate number of qualified staff to operate and maintain the water supply and sanitation system to acceptable standards</li> </ul>	<ul style="list-style-type: none"> <li>• The Project will enable substantial improvements in the efficiency of PWSS operations through institutional development support including (i) separation of water supply accounts, (ii) institutionalization of double-entry accounting, (iii) establishment of asset inventory and balance sheet, and (iv) improvement and possibly outsourcing of billing and collection.</li> <li>• All the activities and institutional changes outlined above will be mandatory, and must be completed for a pourashava to qualify for phase 2 financing. This is expected, at the minimum, to create financially autonomous water supply units in the pourashava. In addition, organizational assistance will be provided to prepare and implement simplified guidelines to allow full decentralization of tariff approval and staff appointment/approval to the pourashava.</li> <li>• The SDP-WSSB clearly states that the preferred option for pourashava water utilities is a pourashava-owned PLC—an option that the Project will support as an optional reform. The PLC model will allow much greater operational autonomy, as it would operate under the Companies Act.</li> </ul>
<ul style="list-style-type: none"> <li>• Implementation delays can be avoided by early establishment and staffing of the PMU</li> </ul>	<ul style="list-style-type: none"> <li>• Other advance actions were agreed to including establishing and staffing the PMU and appointing a permanent project director upon approval of the Government's Development Project Proposal.</li> </ul>
<ul style="list-style-type: none"> <li>• Inadequate staff resources to implement the project</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent staff appointments are incorporated in the project plan and given high priority; budgetary support is provided for incremental staff for the project duration.</li> </ul>
<ul style="list-style-type: none"> <li>• Lack of management transparency</li> </ul>	<ul style="list-style-type: none"> <li>• Significant transparency measures, including a procurement website and civil society engagement through the town coordinating committees are included in project design.</li> </ul>
<ul style="list-style-type: none"> <li>• Design and documentation inadequately understood by local contractors</li> </ul>	<ul style="list-style-type: none"> <li>• Documentation will be in both English and Bengali.</li> </ul>
<ul style="list-style-type: none"> <li>• Approval processes in design and tender management delayed by lack of delegation of authority</li> </ul>	<ul style="list-style-type: none"> <li>• Significant authority is given to the PIU in the project design; the Project will incorporate delegation of authority provisions in the loan covenants.</li> </ul>
<ul style="list-style-type: none"> <li>• Contractor failure to adequately staff and resource project</li> </ul>	<ul style="list-style-type: none"> <li>• Tender documents are to place specific emphasis on tender appraisal of contractor staffing and resources.</li> </ul>
<ul style="list-style-type: none"> <li>• Multiple contracts add to implementation delays due to lengthy administrative procedures for each contract</li> </ul>	<ul style="list-style-type: none"> <li>• The reduced number of contracts and contract packaging to include all materials should minimize delays.</li> </ul>
<ul style="list-style-type: none"> <li>• Construction delays caused by poor procurement practices</li> </ul>	<ul style="list-style-type: none"> <li>• Civil works contracts will include materials, minimizing the need for separate procurement. The procurement website will increase transparency of the procurement process.</li> </ul>
<ul style="list-style-type: none"> <li>• Project financing inadequate to prevent cash flow problems in final year</li> </ul>	<ul style="list-style-type: none"> <li>• The final year of the Project will cover operation and maintenance, and hence will have minimal cash outflow.</li> </ul>
<ul style="list-style-type: none"> <li>• Inadequate community participation resulting in poor revenue collection</li> </ul>	<ul style="list-style-type: none"> <li>• Extensive NGO and community participation is included in all aspects of the Project; tariff and sanitation awareness programs will directly engage communities; mandatory establishment of town coordinating committees will formalize participation of stakeholders.</li> </ul>
<ul style="list-style-type: none"> <li>• Community awareness of benefits from water and sanitation hygiene practices inadequately understood and promoted</li> </ul>	<ul style="list-style-type: none"> <li>• The emphasis of the sanitation component is on building awareness, not hardware; NGO and local CBO implementation of community education and awareness programs is included in design</li> </ul>
<ul style="list-style-type: none"> <li>• Arsenic impacts on costs of treatment and service delivery reduce benefits of schemes</li> </ul>	<ul style="list-style-type: none"> <li>• The Project adopts national guidelines for avoidance of shallow hand tube wells in preference for deep hand tube wells/access to piped supplies from community systems. Increased costs due to arsenic prevalence are unavoidable.</li> </ul>
<ul style="list-style-type: none"> <li>• Involvement of the pourashava chairs in the earlier project proved to be very effective and was of tremendous help in overall project implementation, especially in solving a range of local issues</li> </ul>	<ul style="list-style-type: none"> <li>• The Project has adopted a consultative approach, particularly with the pourashava chairs during project design and preparation. This approach will be continued into implementation. Pourashava chairs will also chair the PIU, and be part of all major project decisions.</li> </ul>

CBO = community-based organization, NGO = nongovernment organization, PIU = project implementation unit, PLC = public limited company, PMU = project management unit, PWSS = Pourshava Water Supply Section, SDP-WSSB = Sector Development Programme-Water and Sanitation Sector in Bangladesh.

Source: ADB. 1995. *Project Performance Audit Report on the District Towns Water Supply Project in Bangladesh*. Manila. and ADB. 2004. *Project Completion Report on the Second Water Supply and Sanitation Project in Bangladesh*. Manila.

## SUBPROJECT SELECTION CRITERIA

### A. Entry into Phase 1

#### 1. Pilot Towns

1. At the early stage of project design, the Government recommended four pourashavas to be pilot towns for the Project. Feasibility studies were prepared for Brahmanbaria, Jessore, Pirojpur, and Sirajganj. The Department of Public Health Engineering (DPHE) selected the four towns based on (i) achieving better geographic coverage; (ii) having a range of development examples, with Jessore being the most advanced in terms of development and the others being less developed; and (iii) considering different water resource situations, with Pirojpur using surface water for its piped water supply while others depend on groundwater. The water supply systems in these four towns also represent different institutional arrangements with Jessore being managed by DPHE, Brahmanbaria and Sirajganj being jointly managed by DPHE and the pourashavas, and Pirojpur being managed by the pourashavas. The four pilot towns were studied to establish a basis for developing the proposed project interventions. These four pilot towns will be included in the Project.

#### 2. Selection and Ranking of Additional Towns

2. Approximately 12 additional towns will be selected for financing under the Project using a clear and transparent selection methodology. First, an initial screening will identify pourashavas that are secondary towns (classes A and B) and important small commercial towns, have a current population of over 50,000, and have not received any external assistance for water supply improvements worth over Tk50 million since 1998.<sup>1</sup> Next, pourashavas will be ranked based on their weighted scores on the following:

- (i) **Need for piped water supply improvements.** All pourashavas generally require some improvements in water supply and sanitation (WSS), and coverage levels are not higher than 30%. However pourashavas with less than 5% coverage with piped water systems are assumed to demonstrate no demand or need for piped systems, because the shallow water sources available are of high quality and inexpensive to access (weight 30%).
- (ii) **Sanitary latrine coverage.** Pourashavas with sanitation coverage below 60%, which indicates a stronger need for intervention, will be given higher priority (weight 15%).
- (iii) **Quality of available water resources, and need for treatment.** Water sources that include elements such as iron and arsenic above Government allowable levels will require treatment and more complex technical interventions, and therefore be given higher priority (weight 15%).
- (iv) **Poverty incidence.** Pourashavas with 30% or higher poverty levels will be given higher priority. As pourashava data is not available, district data will be used as a proxy (weight 5%).
- (v) **Incidence of waterborne diseases.** Pourashavas that have high incidence of diarrhea and dysentery (more than 0.5% of population per year) indicate more severe need for WSS intervention. As pourashava data is not available, district data will be used as a proxy (weight 5%).
- (vi) **Demonstrated institutional commitment to improving the sustainability of WSS operations.** The commitment of the pourashava to tariff reforms is considered one of the key criteria to ensure success and sustainability of the

<sup>1</sup> Investments of less than Tk50 million indicates only minor improvements were done, which would not have significant impacts on the overall viability of the pourashava-wide system.

Project. Therefore, pourashavas that have revised tariffs since 2000 will be given higher priority (weight 30%).

3. The initial ranking of towns, based on the selection criteria is shown in Table A5.1:

**Table A5.1: Pourashava Rankings**

<b>Rank</b>	<b>Pourashava</b>	<b>Total Weighted Score</b>
1	Natore	1.00
2	Jhinadha	1.00
3	Moulavi Bazar	0.95
4	Kishorganj	0.85
5	Mymensing	0.85
6	Netrokona	0.85
7	Madaripur	0.80
8	Choumohani	0.80
9	Narsingdi	0.80
10	Joypurhat	0.80
11	Sherpur	0.80
12	Lakshmipur	0.75
13	Munshiganj	0.75
14	Gaibandha	0.65
15	Iswardi	0.55
16	Lalmonir Hat	0.55
17	Rajbari	0.50
18	Hazigonj	0.45
19	Gazipur	0.35
20	Laksham	0.35
21	Saidpur	0.05

Source: Asian Development Bank.

4. Detailed assessments of rehabilitation works will be carried out in the top 12 ranked towns to determine their final eligibility for financing through phase 1 of the Project. Based on this assessment, pourashavas that (i) have rehabilitation costs of no more than \$500 per connection; (ii) will not be classified as category A for involuntary resettlement according to Asian Development Bank (ADB)'s requirements; and (iii) will not be classified as category A for environmental impacts according to ADB guidelines, and satisfy the environmental subproject selection criteria in the Project's environmental assessment and review procedures, will be included in phase 1 (Table A5.3).

## **B. Entry into Phase 2**

5. Inclusion in phase 2 will primarily be based on the feasibility of proposed phase 2 investments, and performance in phase 1. The feasibility assessments for phase 2 will be carried out during phase 1. Only pourashavas with phase 2 investments that (i) will not fall into category A for involuntary resettlement according to ADB guidelines, (ii) will not fall into category A on environmental impacts and satisfy the environmental subproject selection criteria in the Project's environmental assessment and review procedures, (iii) have investment cost for piped water systems of not more than \$1,000 per new connection, and (iv) have total investment costs for phase 2 piped water supply improvements of no more than \$3 million will be eligible for consideration in phase 2.

6. In addition to these feasibility criteria, pourashavas must also meet the performance criteria given in Table A5.2 to qualify for phase 2. Evaluation will be carried out by the Pourashava Performance Review Committee. Environmental criteria for subproject selection are outlined in Table A5.3.

**Table A5.2: Performance Criteria**

<b>Phase 2</b>	<b>Fully Satisfactory</b>	<b>Minimum Requirements</b>
<b>A. Technical</b>		
1. Rehabilitation and other physical works under phase 1 investment plan completed	100% completed	80% completed
2. Targeted service connections and sanitary latrine construction under phase 1 investment plan completed	100% completed	80% completed
3. Water meters in all existing and planned service connections under phase 1 plan installed	100% metered	80% metered
<b>B. Financial</b>		
1. A tariff and financial action plan for the water utility prepared and approved by the pourashava council	100% completed	100% completed
2. First tariff increase in tariff and financial action plan implemented	100% implemented	100% implemented
3. Double-entry accounting system established and operational	Established and operational	Established and operational
4. Water utility assets fully inventoried and appraised; asset registry completed	100% completed	80% completed
5. Tariff collection efficiency improved	100% collection efficiency	80% collection efficiency
6. Water supply-related electricity arrears paid	80% paid (current bill), clearance of arrears (more than 60% over 2 years)	60% paid (current bill), clearance of arrears (more than 40% over 2 years)
<b>C. Social</b>		
1. Town coordinating committee established with at least 10 women members	4 meetings conducted	2 meetings conducted
2. Town water and sanitation committee established with at least 10% women members	4 meetings conducted	2 meetings conducted
<b>D. Institutional</b>		
1. Pourashava and pourashava water supply section personnel trained as scheduled	100% completed	100% completed
2. Staff positions in pourashava water supply section filled	Full staffing as required	Key staff

Source: Asian Development Bank.

**Table A5.3: Environmental Criteria for Subproject Component Selection**

<b>Component</b>	<b>Criteria</b>
Overall Selection Criteria	<ul style="list-style-type: none"> <li>• Site selection will result in minimum or no resettlement/relocation.</li> <li>• No destruction/disturbance to historical and cultural places/values will occur.</li> <li>• Component establishment should avoid conversion of prime agriculture areas as much as possible.</li> </ul>
Water Supply System (Water Treatment Plant)	<ul style="list-style-type: none"> <li>• The plant will not impair or cause damage/loss to cultural sites and environmentally sensitive areas, and will not be located adjacent to or within critical sites such as areas of historical, archaeological, of cultural significance; ecologically protected area; wetland; mangrove forests; estuarine zone; bays; or special area for protecting biodiversity. If sensitive area(s) are found in the vicinity of the project site, consultation with the government agency concerned will be conducted to determine the appropriate distance that should be observed and clearance/approval will be secured (phase 2).</li> <li>• The plant will not be located in areas prone to raw water pollution from upstream wastewater discharge from communities, industries, or agricultural and soil erosion runoff (phase 2).</li> <li>• Pump tests show safe drawdown of well field and will not lead to excessive groundwater extraction (phases 1 and 2).</li> <li>• Absence of social conflict is confirmed after consultation with affected groups (phases 1 and 2).</li> <li>• Abstraction of raw water for water supply does not conflict with other beneficial water uses for surface and groundwater resources, and excessive abstraction of water affecting downstream water users is avoided (phases 1 and 2).</li> <li>• Excessive pathogens or minerals are not in the raw water supply requiring expensive water treatment (phases 1 and 2).</li> <li>• Densely populated areas are avoided (applicable to phase 2 Water Treatment Plant but not to distribution pipe network).</li> </ul>
Leaching pits for toilets	<ul style="list-style-type: none"> <li>• Will not cause emission of foul odor and proliferation of insects, rodents, etc.</li> <li>• Favorable soil characteristics are present to ensure seepage and at the same time protect shallow groundwater aquifers.</li> </ul>
Compost sludge pits	<ul style="list-style-type: none"> <li>• Sites should be accessible by road.</li> <li>• Site is located at a distance (about 2 kilometers) from the main town area.</li> <li>• Possible wind direction is away from the town area.</li> <li>• Site is located in an elevated and dry area.</li> </ul>

Source: Environmental Assessment and Review Procedure.

## DETAILED COST ESTIMATES AND FINANCING PLANS

**Table A6.1: Detailed Cost Estimates by Expenditure Category**

Item	(\$)		Total	% of Total Base Cost
	Foreign Exchange	Local Currency		
<b>A. Base Cost</b>				
<b>1. Water Supply Improvements</b>				
Civil work	1,712,084	15,408,758	17,120,842	35
Equipment	11,440,461	4,903,055	16,343,516	33
Resettlement	387,692	0	387,692	1
Land	0	3,142,408	3,142,408	6
<b>Subtotal (A1)</b>	<b>13,540,237</b>	<b>23,454,220</b>	<b>36,994,457</b>	<b>75</b>
<b>2. Sanitation Improvements</b>				
Civil work	377,150	3,394,350	3,771,500	8
Equipment	490,000	210,000	700,000	1
Nongovernment organization	0	1,240,000	1,240,000	3
<b>Subtotal (A2)</b>	<b>867,150</b>	<b>4,844,350</b>	<b>5,711,500</b>	<b>12</b>
<b>3. Institutional Development</b>				
Consultancy	1,677,028	4,324,827	6,001,855	12
Vehicles/motorcycles/office equipment and computer	297,385	18,000	315,385	1
Incremental recurrent cost	0	509,077	509,077	1
<b>Subtotal (A3)</b>	<b>1,974,413</b>	<b>4,851,904</b>	<b>6,826,317</b>	<b>14</b>
<b>Base Costs before Taxes and Duties</b>	<b>16,381,800</b>	<b>33,150,474</b>	<b>49,532,274</b>	<b>100</b>
<b>Tax and Duties</b>	0	9,939,096	9,939,096	20
<b>Base Costs after Taxes and Duties</b>	<b>16,381,800</b>	<b>43,089,570</b>	<b>59,471,370</b>	<b>120</b>
<b>B. Contingencies</b>				
1. Physical Contingencies	875,383	1,728,231	2,603,614	5
2. Price Contingencies	1,854,244	5,117,290	6,971,534	14
<b>C. Interest Charges</b>	2,005,191	0	2,005,191	4
<b>Total</b>	<b>21,116,617</b>	<b>49,935,091</b>	<b>71,051,708</b>	<b>143</b>

Note:

- a. Exchange rate of Tk65 = \$1 is used throughout the project period.
- b. Base costs are as of December 2005.
- c. Taxes and duties are computed at 15% VAT for all goods and 20% custom for imported goods.
- d. Physical contingencies are computed as 10% for NGO contracts, and consultancy; 5% for civil work and equipment, and 3% for others.
- e. Price contingencies are computed at 1.9% in all years for foreign cost, and at 6% in all years for local costs.
- f. The ADB loan has an interest rate of 1% during implementation; OPEC loan has an interest rate of 1% and a service charge of 1% during the implementation period.

Source: Asian Development Bank estimates.

**Table A6.2: Detailed Cost Estimate by Financier**  
(\$)

Item	ADB				OFID				Government				Community			
	Cost	Foreign Exchange	Local Currency	Total	%	Foreign Exchange	Local Currency	Total	%	Foreign Exchange	Local Currency	Total	%	Foreign Exchange	Local Currency	Total
<b>A. Base Cost</b>																
<b>1. Water Supply Improvements</b>																
Civil work	17,120,842	909,562	8,186,056	9,095,618	53	397,689	3,579,197	3,976,886	23	404,834	3,485,804	3,890,638	23	0	157,700	157,700
Equipment	16,343,515	9,208,269	3,946,401	13,154,670	80	2,232,191	956,653	3,188,845	20	0	0	0	0	0	0	0
Resettlement	387,692	0	0	0	0	0	0	0	0	387,692	0	387,692	100	0	0	0
Land	3,142,408	0	0	0	0	0	0	0	0	0	3,142,408	3,142,408	100	0	0	0
<b>Subtotal (A1)</b>	<b>36,994,457</b>	<b>10,117,831</b>	<b>12,132,457</b>	<b>22,250,288</b>	<b>60</b>	<b>2,629,880</b>	<b>4,535,851</b>	<b>7,165,731</b>	<b>19</b>	<b>792,526</b>	<b>6,628,212</b>	<b>7,420,738</b>	<b>20</b>	<b>0</b>	<b>157,700</b>	<b>157,700</b>
<b>2. Sanitation Improvements</b>																
Civil work	3,771,500	260,988	2,348,890	2,609,878	69	0	0	0	0	116,162	726,260	842,422	22	0	319,200	319,200
Equipment	700,000	490,000	210,000	700,000	100	0	0	0	0	0	0	0	0	0	0	0
Nongovernment organization	1,240,000	0	1,240,000	1,240,000	100	0	0	0	0	0	0	0	0	0	0	0
<b>Subtotal (A2)</b>	<b>5,711,500</b>	<b>750,988</b>	<b>3,798,890</b>	<b>4,549,878</b>	<b>80</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>116,162</b>	<b>726,260</b>	<b>842,422</b>	<b>15</b>	<b>0</b>	<b>319,200</b>	<b>319,200</b>
<b>3. Institutional Development</b>																
Consultancy	6,001,855	1,677,028	4,324,827	6,001,855	100	0	0	0	0	0	0	0	0	0	0	0
Vehicles/motorcycles/office equipment and compu	315,385	297,385	18,000	315,385	100	0	0	0	0	0	0	0	0	0	0	0
Incremental recurrent cost	509,077	0	203,631	203,631	40	0	0	0	0	0	305,446	305,446	60	0	0	0
<b>Subtotal (A3)</b>	<b>6,826,317</b>	<b>1,974,413</b>	<b>4,546,458</b>	<b>6,520,871</b>	<b>96</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>305,446</b>	<b>305,446</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Base Costs before Taxes and Duties</b>	<b>49,532,274</b>	<b>12,843,231</b>	<b>20,477,805</b>	<b>33,321,037</b>	<b>67</b>	<b>2,629,880</b>	<b>4,535,851</b>	<b>7,165,731</b>	<b>14</b>	<b>908,688</b>	<b>7,659,918</b>	<b>8,568,606</b>	<b>17</b>	<b>0</b>	<b>476,900</b>	<b>476,900</b>
<b>Tax and Duties</b>	<b>9,939,096</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,939,096</b>	<b>9,939,096</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Base Costs after Taxes and Duties</b>	<b>59,471,370</b>	<b>12,843,231</b>	<b>20,477,805</b>	<b>33,321,037</b>	<b>56</b>	<b>2,629,880</b>	<b>4,535,851</b>	<b>7,165,731</b>	<b>12</b>	<b>908,688</b>	<b>17,599,014</b>	<b>18,507,702</b>	<b>31</b>	<b>0</b>	<b>476,900</b>	<b>476,900</b>
<b>B. Contingencies</b>																
1. Physical Contingencies	2,603,614	717,709	1,265,818	1,983,526	76	131,494	226,793	358,287	14	26,180	211,404	237,584	9	0	24,217	24,217
2. Price Contingencies	6,971,534	1,360,889	2,889,965	4,250,855	61	375,590	1,098,868	1,474,458	21	117,764	1,049,834	1,167,599	17	0	78,622	78,622
<b>C. Interest Charges</b>	<b>2,005,191</b>	<b>1,447,416</b>	<b>0</b>	<b>1,447,416</b>	<b>72</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>557,775</b>	<b>0</b>	<b>557,775</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>71,051,708</b>	<b>16,369,245</b>	<b>24,633,588</b>	<b>41,002,833</b>	<b>58</b>	<b>3,136,964</b>	<b>5,861,512</b>	<b>8,998,476</b>	<b>13</b>	<b>1,610,408</b>	<b>18,860,252</b>	<b>20,470,660</b>	<b>29</b>	<b>0</b>	<b>579,739</b>	<b>579,739</b>

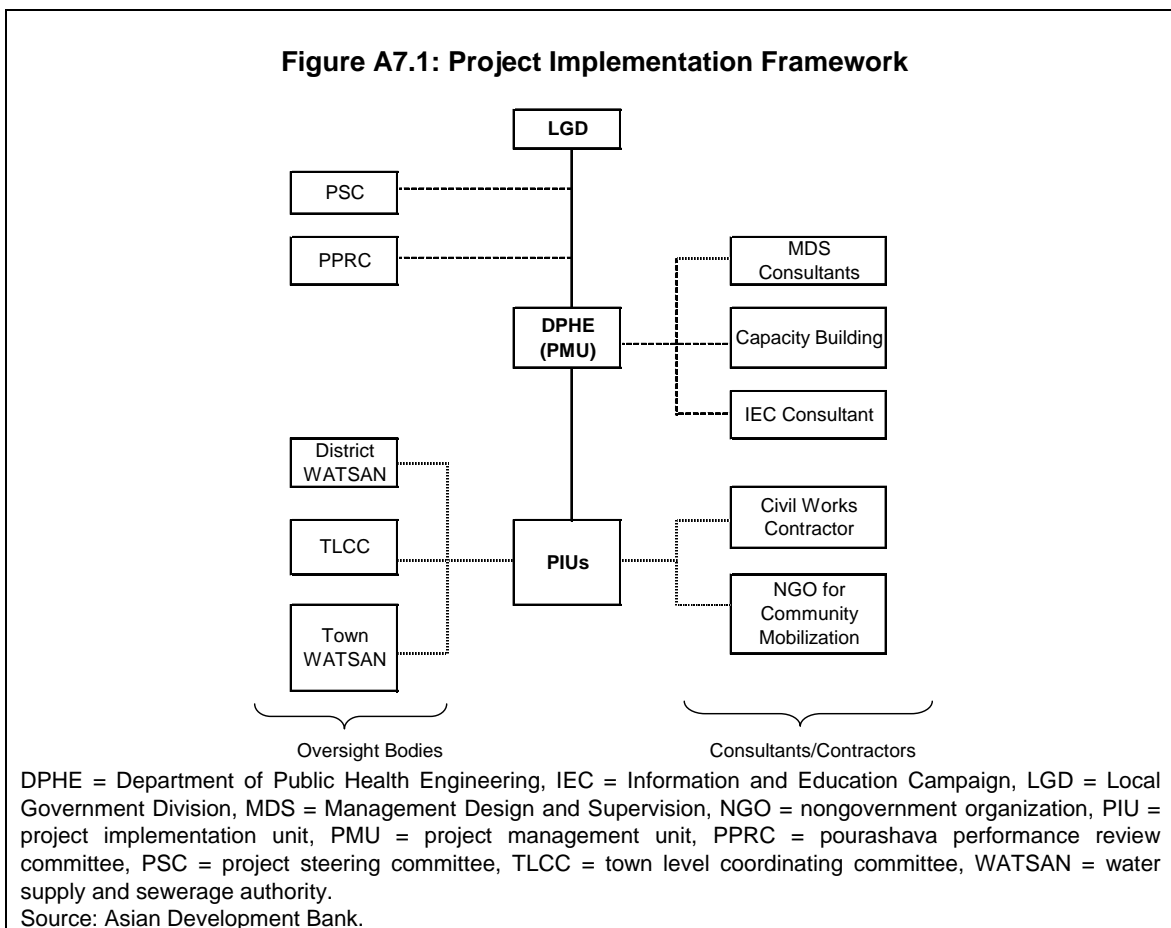
ADB = Asian Development Bank, OFID = OPEC Fund for International Development.

Source: Asian Development Bank estimates.

## IMPLEMENTATION ARRANGEMENTS

### A. The Executing Agency and Project Management Unit

1. The Department of Public Health Engineering (DPHE) will be the Executing Agency and be responsible for the overall technical supervision and execution of the Project.
2. A project management unit (PMU) established in DPHE will be responsible for day-to-day management of the Project and for coordinating with the Asian Development Bank (ADB) and relevant Government agencies. Figure A7.1 provides the framework for project implementation.

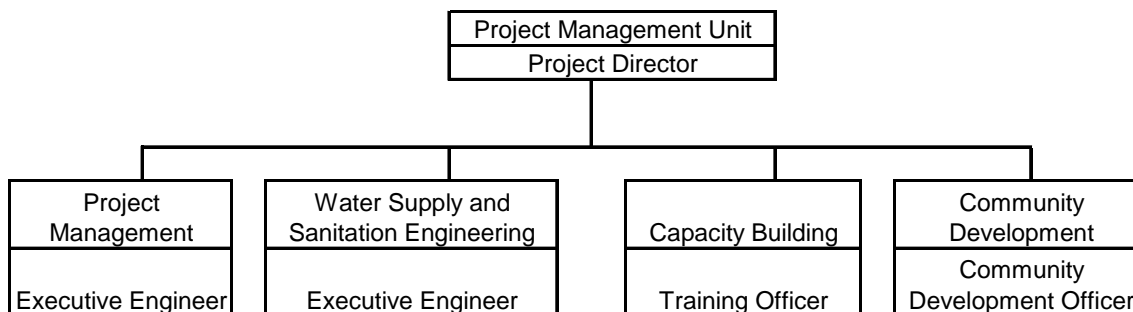


3. The PMU will be headed by a full-time project director who will be charged exclusively with project execution. The PMU will be directly responsible for overall project management, monitoring, and supervision. The project director will be supported by the executive engineers (2), training officer, and community development officer, who head each of the following subunits: (i) project management, (ii) water supply and sanitation engineering, (iii) capacity building, and (iv) community development. In addition, DPHE will provide six staff for the PMU as follows: accounts officer (1), accountant (1), cashier (1), resettlement and/or social safeguards officer (1), contract and/or procurement officer (1), and monitoring and evaluation officer (1). Figure A7.2 indicates the PMU organization.

4. The PMU will (i) prepare the overall project implementation plan; (ii) manage the selection of eligible pourashavas in accordance with the established criteria; (iii) provide overall supervision in the preparation of feasibility studies, design, subproject appraisal reports, and construction supervision; (iv) provide support to pourashavas in tendering and

executing contracts; (v) manage the overall training and capacity-building program for pourashavas; (vi) monitor and supervise all project management activities; (vii) organize monitoring and evaluation activities; (viii) prepare necessary project progress and project completion reports; and (ix) ensure full compliance with ADB's resettlement, environment, and other safeguards and policies.

**Figure A7.2: Project Management Unit Organization**



Source: Asian Development Bank.

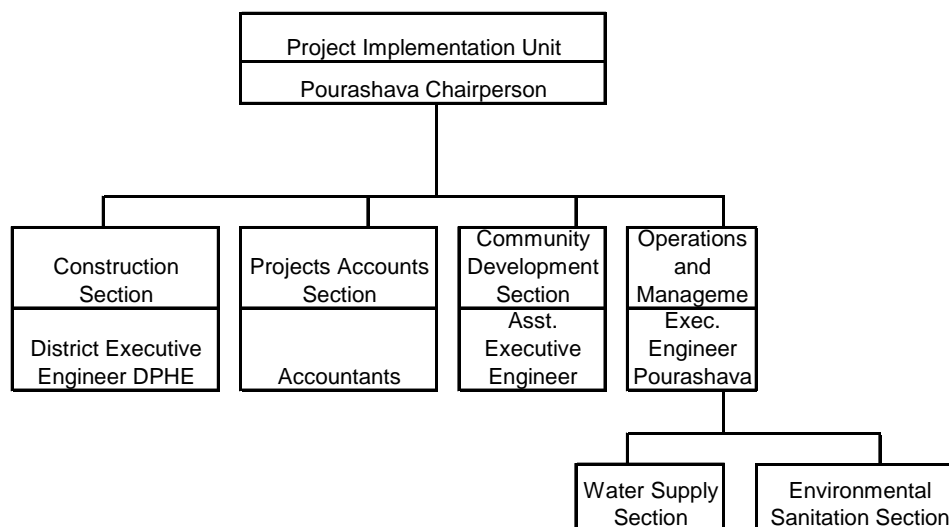
5. The PMU will be assisted by consultants through two contract packages: (i) the management, design, and supervision contract (package A); and (ii) the institutional development contact (package B). A substantial number of person-months will be provided by consultants (resident and assistant resident engineers and trainers and facilitators) who will be resident in the pourashavas. Outline terms of reference for consulting services are in Supplementary Appendix I.

## **B. Implementing Agencies and Project Implementation Units**

6. The pourashavas will be the implementation agencies under the Project, and will be responsible for implementing subprojects in their respective localities. In each participating pourashava, a project implementation unit (PIU) will be established as soon as the pourashava enters into a subproject agreement with DPHE. The PIU, to be located within the pourashava office, will be headed by the pourashava chairperson, supported by pourashava and DPHE district engineers.

7. PIU responsibilities will include (i) procuring and managing all pourashava civil works; (ii) managing implementation of the health and hygiene education programs, construction of community sanitation facilities, and construction of community water points by local nongovernment organizations (NGOs) and community-based organizations (CBOs); (iii) coordinating all pourashava activities with the PMU, ensuring that all interventions are in accordance with the pourashava's needs; (iv) maintaining and managing all pourashava contracts, accounts, and other project management matters in full compliance with ADB and Government guidelines; and (v) ensuring effective engagement of the pourashava community on all project-related matters.

8. The PIU will comprise four sections: (i) project accounts, (ii) construction, (iii) community development, and (iv) operation and management. In addition to the staff of the pourashava water supply section (PWSS), the pourashava will provide at least three staff to the PIU: executive engineer (1), assistant engineer (1), and an accountant (1). DPHE will provide an executive engineer (1 at 50% time allocation) and an assistant engineer. One of these staff will be designated as the resettlement and/or social safeguards officer. The head of the PWSS, will be a member of the operation and management section, expected to focus on the PIU's involvement in water supply management and operations. Figure A7.3 shows the PIU organization.

**Figure A7.3: Project Implementation Unit Organization**

DPHE = Department of Public Health Engineering.  
Source: Asian Development Bank.

### C. Project Steering Committee

9. A project steering committee, chaired by the secretary of the Local Government Division will be created to provide policy guidance and overall coordination in project implementation. Its membership will include the chief engineer, DPHE; the project director of the PMU; and representatives of the Bangladesh Telephone and Telegraph Board, Economic Relations Division, Finance Division of the Ministry of Finance, Implementation Monitoring and Evaluation Division, Local Government Engineering Department, Ministry of Health and Family Welfare, Ministry of Environment, Planning Commission, Power Development Board, Urban Management Support Unit, and the pourashava chairpersons.

10. The project steering committee will hold its first meeting within 3 months of loan effectiveness and at least once every 6 months thereafter to review project progress. The main functions of the committee will be to (i) review project implementation progress, (ii) coordinate with other ministries to resolve project-related problems and issues, (iii) review progress on action plans to be implemented as conditions of the Project, (iv) approve the list of pourashavas that will proceed to phase 2 upon the recommendation of PMU, and (v) provide policy guidance.

### D. Pourashava Performance Review Committee (PPRC)

11. A PPRC will be established within LGD and will be responsible for evaluating each of the Pourashavas' performance and eligibility for Phase 2, in accordance with the criteria set out in Appendix 5. The PMU will provide all required data for this evaluation. PPRC will be chaired by the Secretary of LGD and consists of the Chief Engineer of DPHE, Joint Secretary of LGD, Director General of LGD, representatives from the Planning Commission, ERD, and IMED. The DPHE Project Director for this Project will act as Member Secretary to PPRC. ADB may participate in PPRC meetings as observer.

### E. District and Town Implementation and Coordination Arrangements

12. The PIU will coordinate and consult with several committees including the (i) district water and sanitation committee (district WATSAN), (ii) town coordinating committee (TCC), and (iii) town water supply subcommittee (town WATSAN). This is to ensure extensive citizen

participation in all aspects of the Project, greater transparency in all project transactions and strategies, and broad-based commitment to project interventions and reforms, so that commitments made during the Project are more likely to be sustained despite a change in political leadership in a pourashava.

### **1. District Water and Sanitation Committee**

13. DPHE has already created a 30-member water and sanitation (WATSAN) committee to facilitate coordination among various district government agencies, pourashavas, and local NGOs. Each committee is headed by a deputy commissioner<sup>1</sup> and a DPHE executive engineer acts as member-secretary. Presently, each committee focuses on sanitation activities and problems, and meets at least monthly. It has the following functions:

- (i) provide interdepartmental coordination of the national sanitation program;
- (ii) review and provide guidelines for upazila (footnote 1) activities;
- (iii) review progress of the national sanitation program, identify obstacles, and take actions to overcome the obstacles; and
- (iv) based on progress, submit consolidated coverage report to the project steering committee.

14. During the loan project, the PIU will provide the district WATSAN with regular updates on project progress. The district WATSAN will provide assistance to the PIUs to integrate project activities with other ongoing programs in the district, with particular emphasis on avoiding duplication of efforts.

### **2. Town Coordinating Committee**

15. A TCC will be established in each project pourashava<sup>2</sup> during the early months of phase 1. The committee will be headed by the pourashava chair and have about 60 members (10 of which should be women) as follows: (i) all ward commissioners, (ii) civil society representatives including the poor, (iii) professional group representatives, and (iv) citizen group representatives.

16. The TCCs main function related to the Project will be to

- (i) provide mechanisms for public/consumer consultation on project proposals and issues, coordinate with the PIU to resolve these issues, and identify roles of citizens (specifically women) in resolving these issues;
- (ii) review and endorse the proposed plans for the pourashava including rehabilitation program of works, feasibility studies, and reform action plan (including the tariff plans and the management plans for the water supply utility);
- (iii) determine ways and means to enlist cooperation and assistance from organizations dealing with pourashava development;
- (iv) review and provide advice on the community development aspects of the Project, particularly with regard to NGO activities (socioeconomic surveys, mobilization of user groups, consumer awareness programs);
- (v) prepare proposals for advocacy with the Government on issues having implications for urban water supply policy reforms; and

<sup>1</sup> A pourashava is administratively under a subdistrict (upazila), which is under a district. The deputy commissioner is in charge of a district with responsibilities including coordination of development activities in the district.

<sup>2</sup> TCCs are already established for towns involved in the Urban Governance and Infrastructure Improvement Project. For other towns, the TCC will be established in accordance with the guidelines developed for the Urban Governance Project. The TCC terms of reference will be expanded to accommodate WSS-related project aspects.

- (vi) set up task forces with time-bound terms of reference to deal with specific areas of concern.

### **3. Town Water Supply Subcommittee (Town WATSAN)**

17. The pourashava will create a water supply and sanitation subcommittee headed by the pourashava chair and comprising (i) chief executive officer, (ii) executive engineer of the pourashava, (iii) executive engineer of DPHE, (iv) ward commissioners, and (v) NGO representatives as appropriate. This subcommittee will act as the local project implementation coordination committee, be more technical in nature than the TCC, and help to resolve all pourashava implementation issues for the Project.

18. The main responsibilities of the town WATSAN are to

- (i) review the proposed plans for the pourashava including rehabilitation program of works, feasibility studies, reform action plan (including the tariff plans and the management plans for the water supply utility);
- (ii) review progress and resolve problems and issues in project implementation;
- (iii) develop local plans and programs to meet the long-term water supply and sanitation needs of the pourashava;
- (iv) review procedures for contract tendering, procurement, and management;
- (v) review audits of the PWSS and project accounts; and
- (vi) review progress on phase 1 performance criteria and develop strategy to meet targets.

### IMPLEMENTATION SCHEDULE

Item	Phase 1		Phase 2				
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>A. General</b>							
1. Loan Effectiveness							
2. Consulting Services							
a. Invitation for Bids							
b. Evaluation							
c. Negotiation and Award							
d. Mobilization							
<b>B. Water Supply Component</b>							
<b>1. Phase I: Rehabilitation</b>							
a. Preparation of Rehabilitation Program of Works							
b. Procurement of Equipment							
c. Procurement of Civil Works							
i. Prequalification							
ii. Tendering and Contract Award							
d. Construction							
e. Commissioning and Testing							
f. Tariff Awareness Campaign							
<b>2. Phase II: Expansion</b>							
a. Feasibility Studies for New Towns							
b. Detailed Design							
i. Sample Towns (4)							
ii. New Towns (12)							
c. Land Acquisition and Resettlement Activities							
d. Procurement of Equipment							
e. Procurement of Civil Works							
i. Prequalification							
ii. Tendering and Contract Award							
f. Construction							
g. Commissioning and Testing							
h. Operations and Maintenance							
i. Water Points							
i. Community Mobilization/Training							
ii. Construction of Deep Tubewells							
<b>C. Sanitation Component</b>							
1. Engagement of NGOs							
2. Formation of CBO User Groups							
3. Hygiene Awareness Program							
4. Community and Public Sanitation Improvement							
<b>D. Capacity Building</b>							
1. Project Management Support							
2. Preparation of Training Strategy, Curriculum, Program, Course Design, and Program							
3. Implementation of Training Program							
4. Performance Evaluation for Phase 2 Eligibility							

CBO = community-based organization, NGO = nongovernment organization.  
 Source: Asian Development Bank.

## INDICATIVE PROCUREMENT PLAN

**Table A9.1: Project Information**

Country	People's Republic of Bangladesh
Name of Borrower	People's Republic of Bangladesh
Project Name	Secondary Towns Water Supply and Sanitation Sector Project
Loan Reference	Loan BAN-36297
Date of Effectiveness	January 2007
Amount (\$)	\$41 million
Of which Committed, (\$)	
Executing Agency	Department of Public Health Engineering
Approval Date of Original Procurement Plan	
Approval of Most Recent Procurement Plan	
Publication for Loan Advertisements	
Period Covered by this Plan	August 2006–January 2009

BAN = Bangladesh.

Source: Asian Development Bank.

**Table A9.2: Procurement Thresholds, Goods and Related Services, Works, and Supply and Install**

<b>A. Procurement Method</b>	<b>To be used above (Value \$)</b>
ICB Works	\$2,000,000
ICB Goods	\$ 500,000
NCB Works	\$ 100,000
NCB Goods	\$ 100,000
<b>B. Exceptional Methods</b>	
Community participation in procurement	Community facilities including community water points and community latrines are procured by the community. Each of the community facilities should not cost more than \$10,000.

ICB = international competitive bidding, NCB = national competitive bidding.

Source: Asian Development Bank.

**Table A9.3: Procurement Thresholds, Consultants Services**

<b>A. Procurement Method</b>	<b>To be used above (value \$)</b>
Quality- and Cost-Based Selection (QCBS)	\$200,000
Consultants Qualifications Selection (CQS)	\$0
Least Cost Selection (LCS)	
<b>B. Alternative Method</b>	

## INDICATIVE PROCUREMENT PLAN

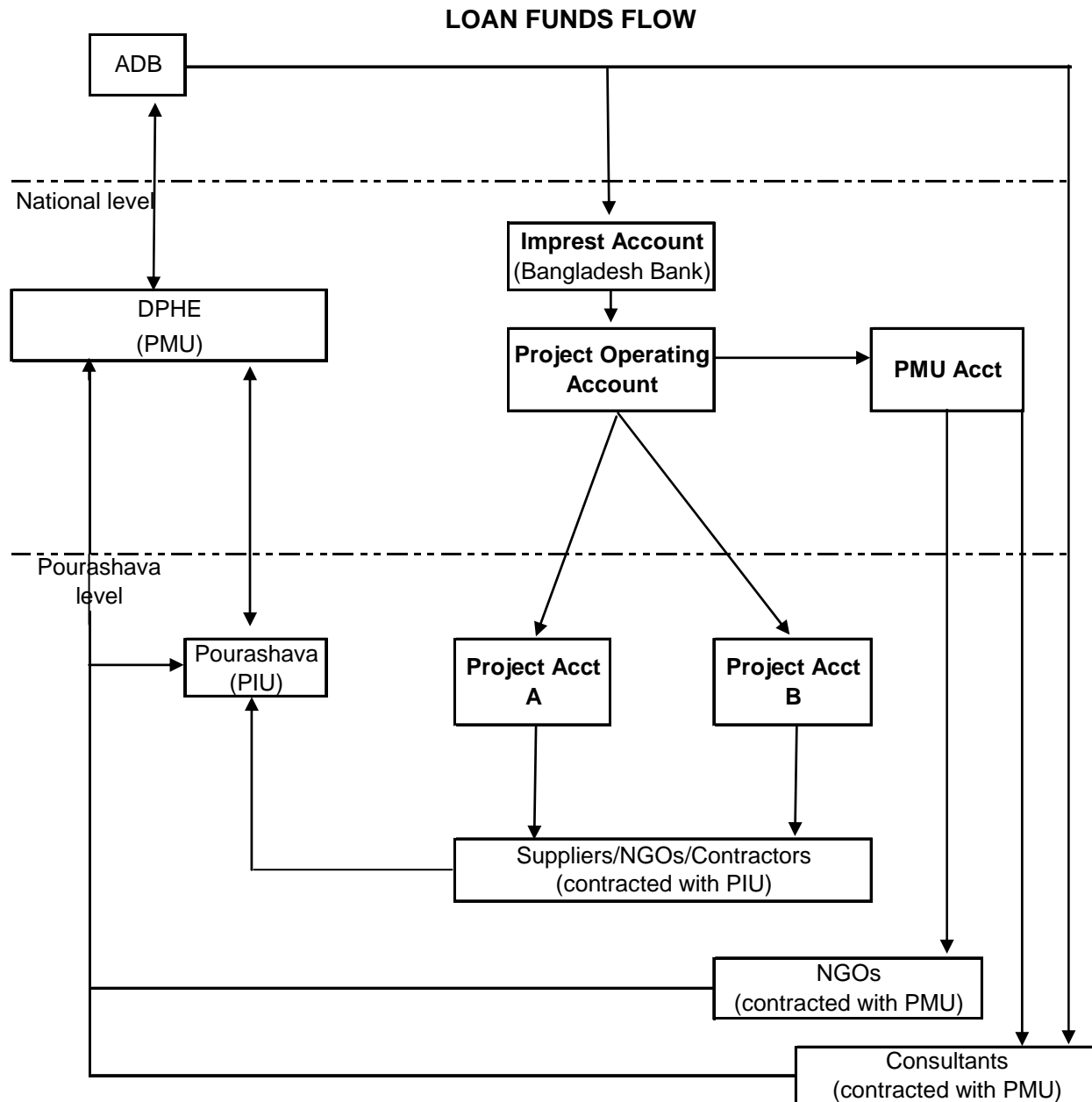
Contract Description	Estimated Cost (\$)	Procurement Method	Expected Date of Advertisement	Prior Review Y/N	Comments
<b>A. Water Supply Improvements</b>					<b>Responsible Agency</b>
1. Brahmanbaria					
a. Rehabilitation of the existing water system	477,970	NCB	July 2007	Y	Pourashava
b. Drilling, testing & development of PTWs	393,513	NCB	October 2009	Y	Pourashava
c. Construction of new WTPs and OHTs	1,455,759	NCB	October 2009	Y	Pourashava
d. New pipeline works	987,775	NCB	December 2009	Y	Pourashava
e. Water point sources - for communities <sup>a</sup>	96,873	Community Participation	January 2009	Y	Pourashava
2. Jessore					
a. Rehabilitation of the existing water system	1,321,931	NCB	July 2007	Y	Pourashava
b. Drilling, testing & development of PTWs	885,403	NCB	October 2009	Y	Pourashava
c. Construction of new OHTs	224,809	NCB	October 2009	Y	Pourashava
d. New pipeline works	1,160,462	NCB	December 2009	Y	Pourashava
e. Water point sources - for communities <sup>a</sup>	44,711	Community Participation	January 2009	Y	Pourashava
3. Pirojpur					
a. Rehabilitation of the existing water system	1,118,257	NCB	July 2007	Y	Pourashava
b. Construction of new WTPs and OHTs	1,030,944	NCB	October 2009	Y	Pourashava
c. New pipeline works	692,643	NCB	December 2009	Y	Pourashava
4. Sirajganj					
a. Rehabilitation of the existing water system	392,162	NCB	July 2007	Y	Pourashava
b. Drilling, testing & development of PTWs	295,134	NCB	October 2009	Y	Pourashava
c. Construction of new WTPs and OHTs	727,879	NCB	October 2009	Y	Pourashava
d. New pipeline works	956,188	NCB	December 2009	Y	Pourashava
e. Water point sources - for communities <sup>a</sup>	93,892	Community Participation	January 2009	Y	Pourashava
<b>B. Sanitation Improvements</b>					
1. Community mobilization through NGO (phase 1) per pourashava	26,400	QCBS/CQS	January 2007	Y	Pourashava
2. Community mobilization through NGO (phase 2) per pourashava	39,600	QCBS/CQS	January 2009	Y	Pourashava
<b>C. Consultancy<sup>b</sup></b>					
1. PMU management and MDS consultants	5,307,386	QCBS	March 2007	Y	PMU
2. Capacity building consultants	1,293,236	QCBS	March 2007	Y	PMU
3. Awareness Campaigns	331,660	QCBS	March 2007	Y	PMU
<b>D. Vehicles</b>					
1. Pickup trucks and motorcycles for PIU/PMU	424,578	NCB	March 2007	Y	PMU
<b>E. Office Equipment</b>					
Computers for PIUs/PMU	37,084	Shopping	March 2007	Y	PMU

CBO = community-based organization, CQS = consultants' qualifications selection, MDS = management design supervision, NCB = national competitive bidding, NGO = nongovernment organization, PIU = project implementation unit, PMU = project management unit, PTW = production tube well, QCBS = quality- and cost-based selection, WTP = water treatment plant, Y/N = yes/no.

<sup>a</sup> Contracts for water point sources are multiple contracts. Typical contract is worth under \$1,000.

<sup>b</sup> NGO contracts indicated under sanitation improvement.

Source: Asian Development Bank.



ADB = Asian Development Bank, DPHE = Department of Public Health Engineering, PIU = project implementation unit, PMU = project management unit, NGO = nongovernment organization.

Funds Flow  $\longrightarrow$   
 Reporting  $\Longrightarrow$   
 Source: Asian Development Bank.

Signatory for the imprest account and project operating account will be the project director, PMU. Signatory for the PMU account will be the deputy project director.

Project account A in each pourashava will be used for payments for all invoices related to pourashava NGO contracts, community sanitation facilities, community water points, and all phase 1 civil works. The pourashava chair and the pourashava executive engineer will be joint signatories on the account.

Project account B in each pourashava will be used for payments for all invoices related to phase 2 (water supply system expansion) civil works. The pourashava chair and the DPHE district executive engineer will be joint signatories on the account.

1. **From the Asian Development Bank (ADB) to the Imprest Account.** ADB funds will be channeled through an imprest account dedicated to the Project at Bangladesh Bank. The ADB funds will be allocated in the Annual Development Program, based on the annual budget estimates prepared by the project management unit (PMU) for the Project. The project director, PMU, will be the authorized signatory to withdraw ADB funds from the imprest account and will process all other disbursement requests to ADB, including direct payment to contractors and reimbursement. The imprest account will be replenished according to the ADB's *Loan Disbursement Handbook*.
2. A project operating account (POA) will be established in a commercial bank acceptable to the Government and ADB. This will be a short-term deposit account, with the project director as authorized signatory. The funds in the POA will in turn be transferred to project accounts A and B in each participating pourashava, and the PMU account, for onward payments to suppliers, nongovernment organizations (NGOs), and contractors as in this appendix. Project account A will be used to make payments to the first phase civil work contracts, local NGO contracts, and community infrastructure, while project account B will be used to make payments to the second phase civil work contracts, which are relatively large contracts. Joint signatories are the pourashava chair and pourashava executive engineer for project account A and the pourashava chair and the district executive engineer of the Department of Public Health Engineering (DPHE) for project account B.
3. **From POA to Project Accounts at the Project Implementing Unit (PIU).** The PIU will make payments from project accounts A and B. The PMU makes an initial advance payment not exceeding 10% of the estimate cost in each phase. To replenish the project accounts, the PIU must submit to the PMU (i) a letter of request for replenishment, (ii) a bank statement to show the account amount and a bank reconciliation, (iii) invoices and/or receipts, (iv) evidence of payments (e.g., withdrawal and/or payment order approved by the project accounts signatories), and (v) certificates on progress achievements (civil works). All signed contracts and confirmed purchase orders should be submitted to the PMU in advance of replenishment requests. The project director, PMU, approves the replenishment request and transfers funds to the project accounts.
4. **From Project Accounts to NGOs and Contractors of Civil Works and Community Infrastructure at the PIUs.** The PIU makes payments from project accounts A and B; this requires the following steps. Contractors and NGOs submit to the PIU (i) a letter of payment request (e.g., advance payments, progress payments, and final payments); (ii) invoices and/or receipts; (iii) certificates on progress achievements (civil work); and (iv) a progress report (NGO), as specified in the contracts. The PIU prepares a withdrawal/payment order to be signed by the signatories, and makes payments to contractors from project accounts.
5. **From the POA to the PMU Account and to NGOs/Suppliers.** The PMU makes payments from the PMU Account for Bangladesh taka-denominated progress payments and invoices as follows. Suppliers for equipment submit invoices to the PMU. NGOs submit to the PMU (i) a letter of payment request; (ii) invoices and/or receipts; and (iii) a progress report, as specified in the contract. The PMU prepares a withdrawal/payment order to be signed by the signatory (project director, PMU), and makes payment to suppliers and NGOs. The PMU account is replenished with funds from the imprest account through the POA with approval of the project director, PMU.
6. **From ADB to Consultants.** Dollar-denominated payments for consulting services contracted by the PMU are paid directly by ADB, which requires the PMU's submission of approved invoices and documentation to ADB in accordance with ADB's *Loan Disbursement Handbook*.

## SUMMARY POVERTY REDUCTION AND SOCIAL STRATEGY

### A. Linkages to the Country Poverty Analysis

<b>Is the sector identified as a national priority in country poverty analysis?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Is the sector identified as a national priority in country poverty partnership agreement?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p><b>Contribution of the sector to reduce poverty in Bangladesh:</b></p> <p>Poverty incidence in urban areas of Bangladesh is currently estimated at 32.6% (Poverty Monitoring Survey, 2004). With a population growth rate of almost 3%, twice the national average, the expanding urban sector results in a growing number of urban poor. The increasing urban population causes further stress on the already inadequate basic urban services and facilities. Only 20% of households in urban areas have access to piped water supply systems, and 40% have no access to sanitary latrines.</p> <p>Access of the population to safe water supply and sanitary toilet facilities in secondary towns is low. Based on the assessment of four secondary towns (pourashavas) during project preparation, 63% did not have access to safe water supply and 41% did not have access to sanitary latrines. Access is even more limited for poor households with 70% of poor households with no access to safe water supply and 58% no access to sanitary latrines. In slum areas where 70% of the poor in the four pourashavas are found, 81% have no access to safe water supply and 73% no access to sanitary latrines.</p> <p>Unsafe water and unhygienic conditions have contributed to the high prevalence of waterborne diseases, with the poor, women, and children most at-risk. Use of shallow hand tube wells, which can be contaminated with arsenic, or open wells and ponds contaminated with bacteria contributes to morbidity and mortality (particularly among infants and newborns). In the four pourashavas assessed, the most common reported diseases are waterborne: diarrhea, dysentery, jaundice, parasitic worms, and skin diseases.</p> <p>The Government emphasizes improved safe water supply and sanitation services as a strategy to reduce health costs, decrease malnutrition, and increase labor productivity (Poverty Reduction Strategy, 2005). The Project is expected to provide access to safe water supply and sanitation to poor households especially households headed by women in the slum areas.</p>			

### B. Poverty Analysis

**Targeting Classification:** Targeted intervention

<p><b>What type of poverty analysis is needed?</b></p> <p>The Project specifically targets the poor in terms of the following components: shared standpipes, shared safe water points utilizing arsenic-free groundwater sources, and community latrines and public toilets. Under the Project, 672 water standpipes and 360 safe water points are committed solely for use of the approximately 70% poor households in slum areas. These facilities, along with community latrines, will be directly managed and maintained by poor beneficiary households organized and trained by nongovernment organizations (NGOs). Poverty impact analyses undertaken in four pourashavas suggest that 30% of beneficiaries for other project components are poor.</p> <p>Participatory analysis using a combination of qualitative and quantitative techniques will gauge post-project benefits in terms of improved access of the poor to urban infrastructure and services. The baseline survey will serve as the benchmark against which post-project impacts on the poor will be measured. Benefits to poor households, benefits to women, and increased participation and capacity building of the poor including women are some of the issues that will be measured and monitored after implementation.</p>
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### C. Participation Process

<b>Is there a stakeholder analysis?</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<p>National and local stakeholder consultations ensured stakeholders involvement as part of project development and design. National steering committee meetings were supplemented with consultations with the Local Government Division, Department of Public Health Engineering, Local Government Engineering Department, and National Institute</p>		

of Local Government. Two major consultation meetings were conducted with pourashavas. Local focus group discussions were held involving representatives of the water works and sanitation agencies, schools, labor groups, women, religious groups, business sector, and consumer groups to determine their views, issues, and priority concerns on water supply and sanitation; and solicit suggestions on how the Project can best address their interests.

**Is there a participation strategy?**  Yes  No

Participation is a core principle of the Project, and is mainstreamed in all aspects of its design. Therefore, a separate participation strategy was not developed.

In the communities, stakeholder participation in project planning and implementation will be through extensive information campaigns, and community organization and mobilization activities through NGOs and community-based organizations. Mobilization and preparation will involve participatory surveys to identify disadvantaged groups and households, and determine specific knowledge, attitudes, and practices on water supply and sanitation. This will enable the determination of entry points and participation mechanisms for water supply and sanitation services, and provide beneficiaries a major role in decision making in activities such as the constitution of the water and sanitation user groups. Through community organization, water and sanitation user associations (including women's user groups) will be formed to ensure the sustainability of facilities. Some operation and maintenance duties and responsibilities will be delegated to community members, including the collection of water and sanitation tariffs. User groups will be organized, and the groups will agree on mechanisms for participation. An information and education campaign will be formulated based on identified needs. Skills development, training, and provision of linkages to institutions will be undertaken as part of the Project to ensure participation.

Project participation will also be promoted through target beneficiary involvement in the choice of interventions appropriate for the community or household; site selection; participation in construction; provision of counterpart funds; conduct of information, education, and awareness campaigns; implementation of community ordinances/sanctions on sanitation and hygiene from the operation and maintenance activities; planning and conduct of income enhancement activities; and monitoring and evaluation.

Finally, the Project will also create and engage town coordinating committees in each participating pourashava, which will involve significant civil society representation. The committees are integral to project implementation and oversight. They form part of the participatory process for identifying, developing, and monitoring pourashava project activities, and ensuring full transparency. More details on the various participatory processes integral to the Project are included in Appendix 7 and supplementary appendices C, D, and H.

#### **D. Gender Development**

##### **Strategy to maximize impacts on women:**

Primary and secondary data have been analyzed to assess the status of women in the four pourashavas. The assessment shows gender gaps in employment, income, education, household roles, and decision making. While the composition of the labor force is almost equal between men and women, of the 28% employed, 89.5% are men and only 10.5% are women. Further, the average annual income of households headed by women is Tk46,621, only 71% of the income of households headed by men. Female illiteracy is four percentage points higher than male illiteracy. In the four pourashavas. While poverty incidence averages 29% poverty incidence, it is 44.1% for households headed by women and 27% for households headed by men.

Parallel to this disparity, access to piped water supply and sanitary latrines by households headed by women is lower. Drinking water is largely sourced from hand tube wells, open wells, and ponds, putting households headed by women at higher risk of arsenic contamination and other waterborne diseases. Moreover, household and community water collection, and water and sanitation management are traditionally female roles. Thus, women are vulnerable to health risks due to deficiencies in water, hygiene, and sanitation in the households and the community. Their access to latrines and other sanitation facilities is often reduced by gender insensitivity to the construction and management of such facilities.

Project design included group targeting strategies to identify the location of vulnerable households headed by women, their mobilization, and organization, to participate in intervention formulation and implementation, and mechanisms to institutionalize and sustain their involvement. During project design, gender issues were identified and mitigation measures proposed and incorporated. Women are proposed to be made primarily responsible for locating the site for construction of community standpipes and community latrines. Monitoring and evaluation systems will generate gender disaggregated information to enable tracking of the Project's gender impacts.

<p><b>Has an output been prepared?</b>            <input checked="" type="checkbox"/> Yes            <input type="checkbox"/> No</p> <p>The gender strategy ensures that gender issues are addressed, women benefit equally from the Project, and interventions avoid gender bias. NGOs will undertake further assessments early in project implementation to identify households headed by women. Special organization and capacity building will be undertaken to form women's groups that will be directly in charge of community standpipe and community sanitary latrine management and monitoring activities.</p>
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#### E. Social Safeguards and Other Social Risks

Item	Significant/ Not Significant/ None	Strategy to Address Issues	Plan Required
<b>Resettlement</b>	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	Subprojects are not anticipated to result in significant land acquisition and resettlement impacts. A resettlement framework was prepared to guide the implementation of subprojects and short resettlement plans were prepared for sample subprojects. Proposed subprojects involving significant involuntary resettlement will be rejected.	<input type="checkbox"/> Full <input checked="" type="checkbox"/> Short Resettlement Plans and Resettlement Framework <input type="checkbox"/> None
<b>Affordability</b>	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	The proposed water tariff increase will not have significant negative impacts on the poor (3% of household income) considering that 4–5% of household income is now spent on sources that are an alternative to piped water. To ensure affordability, a lifeline tariff is part of the proposed water tariff structure. In poor areas, the Project will provide community standpipes and community sanitary latrines managed by user groups from which a nominal fee will be collected representing the users share in the operation and maintenance of the facility.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Labor</b>	<input type="checkbox"/> Significant <input type="checkbox"/> Not significant <input checked="" type="checkbox"/> None	The Project will result in employment opportunities during construction and operation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Indigenous Peoples</b>	<input type="checkbox"/> Significant <input type="checkbox"/> Not significant <input checked="" type="checkbox"/> None	The subprojects are not anticipated to result in any negative impacts to indigenous people. The sample subprojects were not found to have any impacts. None of the current shortlisted pourashavas are in areas with significant indigenous populations. The resettlement framework and resettlement plans provide additional entitlements to vulnerable people affected, including households headed by an indigenous person, should , resettlement impacts be experienced.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Other Risks and/or Vulnerabilities</b>	<input type="checkbox"/> Significant <input type="checkbox"/> Not significant <input checked="" type="checkbox"/> None	No other risks or vulnerabilities were identified.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**GENDER ACTION PLAN**

Area of Focus	Objective	Activities	Task	Target Group	Indicator	Verification	Action By
Secondary Towns Water Supply and Sanitation Design	<p>Integrate gender perspective in the design of WSS interventions.</p> <p>Empower women through participation in development planning.</p>	<p>Considering women's role on WSS, their participation in the Project will be actively sought by</p> <ul style="list-style-type: none"> <li>- forming user groups that ensure at least one third representation of women,</li> <li>- designating women as community motivators and monitors in WSS activities,</li> <li>- planning for participants in specific subproject investments, and</li> <li>- representing the community on the town committee to oversee/monitor WSS activities.</li> </ul>	<p>NGOs conduct an rapid social assessment during detailed design for phase 2 to identify the location of disadvantaged women in the target communities</p> <p>Select/train women as community motivators and subproject monitors.</p> <p>Help identify appropriate WSS infrastructure facilities in the community. Assist in locating/identifying acceptable sites for WSS facilities.</p>	<p>Households headed by , women in slum areas</p> <p>Women residents close to water standpipes</p>	<p>NGOs contracted for the rapid social assessment and social mobilization and IEC, awareness campaign</p> <p>Social development specialist involved in subproject implementation</p> <p>Number of user groups formed and % representation of women</p> <p>Number or percentage women involved in IEC campaign and subproject monitoring</p> <p>Number or percentage women members/leaders in community and pourashava WSS committees</p>	<p>Subproject detailed design reports</p> <p>Progress reports</p> <p>NGO reports</p> <p>Monitoring reports</p> <p>Community feedback</p> <p>Feedback from women beneficiaries</p>	<p>Social development and resettlement specialists</p> <p>Contracted local NGO</p> <p>Pourashava WSS committees</p>
	Ensure women's awareness of their role in the Project and involvement in implementation.	IEC and awareness campaign to highlight women's critical role in WSS	Prepare and implement IEC and awareness campaign that is gender sensitive.	<p>Pourashava residents</p> <p>Women beneficiaries</p>	<p>% women actively involved in WSS activities</p> <p>Improved KAP in WSS</p> <p>Improved collection of water tariff</p>	<p>Progress reports</p> <p>Subproject assessment through focus group discussions</p>	<p>Contracted national IEC group and local NGO</p> <p>User groups and women monitors and motivators</p>
	Ensure that project interventions are designed to be gender sensitive.	<p>Terms of references of the IEC group and local NGOs incorporate gender concerns and issues to be addressed</p> <p>Social/community development specialist develops gender sensitive community development and mobilization</p>	Workshops and focus group discussion	PMO, PIU staff, WATSAN committee members, user groups	<p>Number oriented and trained</p> <p>Feedback from participants</p>	<p>Review reports</p> <p>Monitoring feedback</p>	<p>Social development specialist</p> <p>Contracted NGO</p> <p>User groups</p> <p>PIUs</p>
	Empower women in poor	Training as community motivators and	Define roles and responsibilities, systems,	Women members of user	<p>Training manuals</p> <p>Number of trainings</p>	Feedback from women	Social development

Area of Focus	Objective	Activities	Task	Target Group	Indicator	Verification	Action By
	households, women heading households, and female member of the households.	subproject monitors Training as tariff for collectors of standpipes and community sanitary latrines	and procedures. Formulate rules and regulations for WSS concerns. Provide skills training for motivators, monitors, and collectors.	groups designated as motivators, monitors, and collectors	conducted Training reports Collection report Improvement in KAP in WSS Increase awareness of subproject	beneficiaries, community	specialist  Contracted NGOs  PIUs
	Address needs and concerns of women affected (household heads, widows, elderly, and single) for land acquisition and resettlement.	Collect gender disaggregated data during SES for resettlement planning.	SES questionnaire designed to be gender sensitive and cover gender concerns and issues	Households headed by women and other disadvantaged groups	SES reports  Compensation package addressing women's concerns	Resettlement action plan	Social development specialist  Contracted NGO  PIU
Project Implementation and Monitoring	Ensure mainstreaming of gender perspectives in the STWSSP.	Conduct gender awareness workshops at the PMO and PIUs for project implementers.	Prepare workshop design and training materials.	PMO and PIU staff, WATSAN committee members	Number of workshop participants	Workshop reports Feedback from participants	Social development specialists Contracted NGO
Project Implementation and Monitoring	Ensure women's full involvement and participation.	Conduct IEC and tariff awareness campaigns with specific targeting of women.	Contact national IEC group and local NGOs for implementation. Prepare and review IEC, awareness materials, and strategy.	Women beneficiaries in participating pourashavas, especially those in depressed communities	Number or percentage women aware and actively participating in subproject implementation Increase in KAP on WSS Tariff awareness	Progress reports  Pourashava feedback	IEC groups and contracted local NGOs  PIU  User groups
	Ensure that women equitably benefit from the Project.	Civil works contractors to employ sizeable number of women as workers and ensure equal wages for same type of work as the men	Civil work contract document to include such provision  Orient contractors.	Contractors  Subproject employers	Percentage of women employed of total employed by contractors Wage comparison between employed men and women	Contract invoicing Progress reports  Feedback from women	Construction supervision expert  PIUs  Contractors
	Ensure that women benefit positively from the Project and that the benefits are equitable.	Establish a monitoring and evaluation system to track impact of the subproject intervention on women.	Develop gender disaggregated indicators both qualitative and quantitative, such as reduce burden on women for water access, health improvement, equal employment opportunities, etc.). Develop systems for measurement, analysis and reporting of benefits. Develop mechanism to	PMO and PIUs  Consultants	Progress report  Gender impact of subprojects are part of the regular monitoring and progress reports at various implementation levels	Monitoring report  Special evaluation reports	PMO  PIU  Consultants  User groups

Area of Focus	Objective	Activities	Task	Target Group	Indicator	Verification	Action By
			include women in monitoring and evaluation.				
	Ensure that women's concerns are addressed in resettlement plan.	Monitor resettlement plan implementation.	Include a mechanism to monitor the impact of resettlement plan implementation on women.	Households headed by women Women in depressed communities	% of compensation entitlement provided to women	Resettlement plan monitoring and evaluation reports	Social development specialist NGO IMA
Institutional Development	Promote gender awareness in the institutional development component of the Project.  Ensure that women benefit equally in all the training and capacity-building activities of the institutional development component.	Incorporate gender perspective in all aspects of institutional development program.  Ensure that women participate in the institutional and capacity building.	Review the institutional development program of the STW-SSP.  Incorporate gender aspects in all training programs.  Prepare a list of all training activities that will benefit women and ensure a percentage inclusion of women.  Prepare a list of committees and work groups for the Project and subprojects, and ensure a percentage representation of women.	DPHE Central and district offices, pourashava committees, PMO, and PIUs  User groups Other working groups	Revision of Institutional Development Program sensitive to gender concerns and issues  Training curricula	Institutional reform measures are gender sensitive  All training programs have gender perspective  Progress reports	Social development specialist  Institutional development expert  PMO and PIU  Pourashava
	Monitor usefulness of the GAP.	Track use of the GAP.	Review impact of the GAP.	Project and subproject stakeholders	The GAP is used and reported on regularly Increase in number of gender mainstreaming training activities Strengthened capacity of project executing and implementing agencies to promote, design, and implement investment programs supporting gender equality	Review of progress reports	Social development specialist Institutional development expert  PMO and PIU

DPHE = Department of Public Health Engineering; GAP = gender action plan; IEC = information, education, and communication, IMA = independent monitoring agency; KAP = knowledge, attitude, and practices, NGO = nongovernment organization, PIU = project implementing unit; PMO = project management office; SES = socioeconomic survey; STW-SSP = secondary towns water supply and sanitation; WATSAN = water and sanitation; WSS = water supply and sanitation.

Source: Asian Development Bank.

## DRAFT SUMMARY RESETTLEMENT FRAMEWORK

### A. Introduction

1. The Project will improve water supply and sanitation services by implementing water supply infrastructure improvements and strengthening local water utilities for operational efficiency and financial sustainability. The water supply component will develop and expand piped water supply systems, and provide shared standpipes and shared safe water points. The sanitation and behavioral change component is designed to extend the health impacts of project investments in water supply—promoting hygiene behavior and creating an enabling environment for preventing waterborne diseases through capacity building. It will include community and public sanitation facilities, school sanitation and hygiene education, and awareness and capacity building in hygiene education and sanitation. Capacity building and implementation assistance will also be provided for the Department of Public Health Engineering (DPHE), the Executing Agency, and secondary towns.

2. The Project is designed to minimize land acquisition and resettlement impacts. Rehabilitation of production tube wells, overhead tanks, and treatment plants will be accommodated within the premises of existing facilities and will not involve land acquisition and resettlement. The construction of new water supply infrastructure and sanitation facilities will mostly be on Government land. Impacts due to the rehabilitation and construction of water supply networks will be temporary and minimal, as these are proposed within existing road corridors; if structures are situated in the road corridor, alignments will go around them and be placed under the road. Impacts are to be further minimized through careful subproject siting and alignment during subproject selection, detailed design, and subproject implementation.<sup>1</sup> The subproject selection criteria rule out subprojects with significant<sup>2</sup> involuntary resettlement impacts.

3. Resettlement plans were prepared for sample subprojects in four secondary towns (Brahmanbaria, Jessore, Pirojpur, and Sirajganj pourashavas). Permanent land acquisition required for overhead tanks, production wells, and water treatment plants in Jessore, Pirojpur, and Sirajganj is 0.43 hectares (ha). Land acquisition will have impacts on five households, all of whom are legal owners of the land being acquired. No structures are affected. Rehabilitation and expansion of distribution systems are proposed within existing road corridors. Through transect walks, temporary impacts were estimated in sample subprojects. Assessment of impacts will be finalized during detailed design.<sup>3</sup> A summary of resettlement impacts and key socioeconomic information is in Table A13.1.

### B. Resettlement Framework and Policy

4. This summary provides key points from the resettlement framework. The framework outlines the objectives, policy principles and procedures for land acquisition (if required), compensation, and other assistance measures for those affected persons. The framework is

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<sup>1</sup> Total estimated land requiring permanent acquisition for the Project in 16 pourashavas is 5 ha. Environmental subproject selection criteria includes “site selection shall result to nonsignificant or no resettlement” under the overall selection criteria.

<sup>2</sup> Resettlement is significant when 200 or more people experience major impacts. Major impacts are defined as involving affected people being physically displaced from housing and/or having 10% or more of their productive, income-generating assets lost.

<sup>3</sup> Though these estimates need to be refined during detailed design when alignments are finalized, the transect walk showed potential minor impacts. Those affected will require provision of planks for access and, for some, possible relocation to the other side of the road during construction. The disturbance is expected to be for less than 1 week.

based on the Government's *Acquisition and Requisition of Immovable Property Ordinance of 1982* (amended in 1993 and 1994), and Asian Development Bank policy on involuntary resettlement.<sup>4</sup> The framework provides a comparison of the two documents and addresses gaps. The entitlement matrix for the Project, based on the above ordinance and policy are given in Table A13.4.

**Table A13.1: Summary of Resettlement Impacts**

Item	Brahmanbaria	Jessore	Pirojpur	Sirajganj
Permanent Land Acquisition	0	0.064 ha	0.1121	0.256 ha
Permanently Affected Households	0	1	3	1
Permanently Affected People	0	5	11	4
Nontitled People Affected	0	0	0	0
Households Headed by Women	0	1	0	0
Vulnerable People Affected	0	5	0	0
Affected Structures	0	0	0	0
Affected Trees	0	0	0	0
Affected Common Property Resources	0	0	0	0
Average Household Monthly Income (Tk)	0	Tk12,500	Tk12,000	Tk40,000
<b>Primary Source of Income</b>		<b>Agriculture</b>	<b>Business and Employment</b>	<b>Employment</b>
Temporarily Affected Households	26	35	19	29
Temporarily Affected People	104	175	115	145
Nontitled People Affected	104	175	115	145
Households Headed by Women	0	0	0	0
Vulnerable People Affected	19	26	17	25
Affected Structures	27	32	27	20
Affected Trees	22	40	22	30
Affected Common Property Resources	0	0	0	0
Average Household Monthly Income (Tk):	Tk7,600	Tk8,200	Tk6,100	Tk4,500
<b>Primary Source of Income</b>		<b>Business, Employment, and Hawking</b>	<b>Business and Hawking</b>	<b>Business and Hawking</b>

Source: Asian Development Bank.

5. Loss of land, structure, assets, trees, and crops will be at replacement cost. Independent land appraisers will determine land prices; structures and other assets will be determined by contracted implementing nongovernment organizations (NGOs) through a survey of construction materials; and trees and crops will be determined by NGOs based on a survey of market prices and consultation with agriculture/horticulture experts. NGOs will also undertake consultations with those affected on replacement costs. Vulnerable households will be provided additional assistance in the form of land-for-land replacement options, prioritization in project employment, and an additional allowance for land and structure losses. Income losses are anticipated to be minimal and temporary. Income restoration activities include the provision of short-term allowances and restoration of access to livelihood activities.

### C. Procedure for Resettlement Plan Preparation

6. Based on preliminary technical design, the project implementing unit (PIU) will ensure that the subproject will not have significant involuntary resettlement impacts consistent with the subproject selection criteria. The PIU, with project consultants, will prepare short resettlement plans ensuring that the plans include measures to ensure that socioeconomic conditions, needs, and priorities of women are identified and that the process of land acquisition and resettlement does not disadvantage women. Project consultants will include social development specialists familiar with ADB policy and procedures for the preparation of subproject resettlement plans. The plans will comply with the *Acquisition and Requisition of Immovable Property Ordinance*, ADB policy on involuntary resettlement, and other social safeguard guidelines, and the

<sup>4</sup> ADB. 1995. *Involuntary Resettlement*. Manila.

resettlement framework. The resettlement plans for sample subprojects will be used as models for the preparation and implementation of the plans for other subprojects. Approval of subproject resettlement plans by ADB and compensation prior to displacement will be conditions for the contract of civil works.

7. DPHE and the pourashavas, through the project management unit (PMU) and PIU, will ensure that this resettlement framework is closely followed when a resettlement plan is formulated for a subproject. DPHE will further ensure that adequate resettlement budgets are delivered on time to the pourashavas, and that NGOs are involved for timely implementation of the resettlement plan.

#### D. Institutional Arrangements

8. DPHE is responsible for the overall technical supervision and implementation of the Project through the PMU. PIUs will be established in each pourashava. Further details on agencies responsible for resettlement plan activities are in Table A13.2.

**Table A13.2: Roles and Responsibilities in the Resettlement Process**

Related Activities and Responsibilities	Responsibility
<b>A. Pre-Land Acquisition and Resettlement Plan</b>	
Recruitment/mobilization of international and national resettlement consultants	PMU
Recruitment of implementing NGOs	PMU, PIU
Design and reproduction of project information booklet and preparation of subproject maps	PMU/consultants
Project disclosure and public consultations	PMU, PIU
Selection of CRC and GRC members	PMU, PIU
<b>B. Preparation of Land Acquisition and Resettlement Plan</b>	
Survey and marking of subproject boundaries and ROW in affected lands	Private engineering firm, PIU
Preparation of survey questionnaire	PMU, consultants
Training of implementing NGOs.	PMU, consultants
Survey (detailed measurement survey, social survey, and inventory of losses)	NGO, district commissioner, PIU
Survey on market prices of land, structure, crops, and trees	Land appraiser, NGO, PIU
Processing of survey data	NGO, consultants
Screening of vulnerable people affected	NGO, PIU
Establishment of unit prices	PMU, PIU, NGOs
Calculation of compensation and consultations with people affected	PMU, PIU, NGOs
Writing of resettlement plans	Consultants, PIU
Consultation with people affected, DPHE, pourashava, and stakeholders on the draft resettlement plan	Consultants, PIU, NGO
Finalization of resettlement plans	Consultants/PMU
Review and approval of resettlement plans	ADB
<b>C. Resettlement Plan Implementation</b>	
Mobilization of CRCs/GRCs	PMU, PIU
Establishment of internal monitoring and hiring of IMA	PMU, PIU
Agreement on compensation with people affected and preparation of deeds of sale for land	People affected, PMU/DPHE, PIU
Selection and development of resettlement site(s)	People affected, PMU/DPHE
Budget approval for compensation	DPHE, pourashava
Release of funds for compensation	DPHE, pourashava
Filing and resolution of complaints	People affected, PMU, PIU, pourashava
Application for holding number of lands	Pourashava
Consultation with people affected on schedule of clearing lands including relocation	PIU
Clearing of lands and relocation	People affected,
External assessment of compliance with project policies	IMA
Confirmation of "no objection" for the award of civil works contract	ADB
<b>D. Monitoring and Evaluation</b>	
Social Impact Assessment	IMA

ADB = Asian Development Bank, CRC = compensation and resettlement committee, DPHE = Department of Public Health Engineering, GRC = grievance redressal committee, IMA = independent monitoring agency, NGO = nongovernment organization, PIU = project implementation unit, PMU = project management unit, ROW = right of way.

Source: Asian Development Bank.

## E. Consultation, Disclosure, and Grievance Redress

9. Draft resettlement plans were prepared in consultation with stakeholders. These consultations included various meetings, discussions with those affected, 29 focus group discussions, key informant surveys in four pourashavas, and a socioeconomic survey with 4,847 respondents. Information, including local language versions of the summary resettlement framework, was disseminated to the people affected. The resettlement framework and draft resettlement plans for sample subprojects have been disclosed in the ADB website. Public information booklets in local language and project maps are being prepared for dissemination to people affected by future subprojects. Finalized resettlement plans will also be disclosed in ADB's website, and information dissemination and consultation will continue throughout project implementation. Grievance redress will be through the mechanism summarized in Table A13.3.

**Table A13.3: Grievance and Redressal Mechanism**

Step	Concerning Titled Land	Concerning Structures and Other Assets
Step 1	The affected person consults with PIU staff on possible complaint. If no acceptable solution/clarification is provided, the PIU staff will help the individual to file a grievance/complaint.	The affected person consults with PIU staff on possible complaint. If no acceptable solution/clarification is provided, the PIU staff will help the individual to file a grievance/complaint.
Step 2	The affected person files a grievance/complaint verbally or in writing to the CRC/GRC. If unwritten, the CRC/GRC will place it in writing. The individual, the CRC/GRC, and PIU representative will meet to hear the complaint, and resolve the grievance/complaint within 15 days.	The affected person files a grievance/complaint verbally or in writing to CRC/GRC. If unwritten, CRC/GRC will place it in writing. The individual, CRC/GRC, and PIU representative will meet to hear the complaint, and resolve the grievance/complaint within 15 days.
Step 3	If no solution or understanding is reached, the affected person files the grievance/complaint to the pourashava chairperson for resolution within 15 days.	If no solution or understanding is reached, the affected person files the grievance/complaint to the pourashava chairperson for resolution within 15 days.
Step 4	If no solution or understanding is reached, the GRC will assist the affected person to file a complaint with the district commissioner. Guided by Section 27 of the ordinance, the district commissioner will appoint an arbitrator.	If no solution or understanding is reached within the prescribed period, or the resolution is unsatisfactory to the affected person, then the affected person files the grievance/complaint to the district court.
Step 5	The arbitrator hears the complaints and renders a decision within 30 days upon appointment. If the affected person is not satisfied with the decision of the arbitrator, the district commissioner forms an arbitration appellate tribunal.	The district court will assess the merit of grievance/complaint and schedule a hearing. The district court's decision is final.
Step 6	The arbitration appellate tribunal hears and assesses the merit of the grievance/complaint. Its decision is final and will be implemented.	

CRC = compensation and resettlement committee, GRC = grievance redressal committee, PIU = project implementation unit.

Source: Asian Development Bank.

## F. Monitoring and Evaluation

10. Internal monitoring will be conducted by the PMU and PIU with assistance from the implementing NGO. Internal monitoring reports on land acquisition and resettlement will be included in project progress reports. PIU reports will contain (i) accomplishments to-date, (ii) objectives attained and not attained during the period, (iii) problems encountered, and (iv) targets for the next quarter. The PIUs will send these reports to the PMU for integration and inclusion in the PPR for submission to ADB. The PMU will engage an independent monitoring agency for external monitoring of subprojects. The agency, directly reporting to ADB, will undertake compliance monitoring and social impact evaluation.

## **G. Resettlement Budget**

11. Detailed budget estimates for involuntary resettlement will be prepared for each resettlement plan, by the PMU/PIU. They will be included in the overall subproject estimate. The budget will include (i) detailed costs of land acquisition, compensation, relocation, and rehabilitation of income and livelihood; (ii) source of funding; (iii) arrangements for approval; and (iv) the flow of funds and contingency arrangements. All resettlement funds will be provided by DPHE based on the financing plan agreed by the Government and ADB. Land acquisition, compensation, relocation and rehabilitation of income and livelihood will be considered as an integral component of project costs.

**Table A13.4: Entitlement Matrix**

	Type of Loss	Application	Entitled Person <sup>a</sup>	Compensation Policy	Implementation Issues	Responsible Agency
1a	Loss of land	Homestead land, agricultural land, or vacant plot	Owner(s) with holding numbers (legal title)	<ul style="list-style-type: none"> <li>Land-for-land arrangements of equal productive capacity satisfactory to the person affected</li> <li>Option for cash compensation equivalent to replacement cost</li> <li>Provision of all taxes, registration costs, and transfer payments incurred for replacement land</li> <li>Option to be compensated if remaining land is no longer viable</li> <li>Provision of access to equivalent common property resources previously accessed</li> <li>Additional compensation for vulnerable households (item 5)</li> </ul>	<ul style="list-style-type: none"> <li>Authenticity of holding numbers</li> <li>If land-for-land is offered, title will be to both husband and wife.</li> <li>Vulnerable households to be identified during DMS conducted as part of the resettlement plan</li> </ul>	<ul style="list-style-type: none"> <li>Verification of people affected by ward commissioner</li> <li>Pourashava to provide replacement land</li> <li>Land appraiser to determine replacement value</li> <li>PIU to consult people affected on compensation</li> <li>DPHE to provide budget and release cash compensation payments</li> <li>Pourashava with PIU/PMU assistance to determine viability of remaining land</li> </ul>
1b	Loss of land	Homestead land, agricultural land, or vacant plot	Tenant(s) and leaseholder(s)	<ul style="list-style-type: none"> <li>Compensation equivalent to 3 months of rental</li> <li>Additional compensation for vulnerable households (item 5)</li> </ul>	<ul style="list-style-type: none"> <li>Landowners will reimburse tenants and leaseholders land rental deposit or unexpired lease.</li> <li>Vulnerable households to be identified during DMS conducted as part of the resettlement plan</li> </ul>	<ul style="list-style-type: none"> <li>Verification of people affected by ward commissioner</li> <li>Pourashava with PIU/PMU will confirm land rental, ensure tenants and leaseholders receive reimbursement for land rental deposit or unexpired lease</li> </ul>
1c	Loss of land	Homestead land, agricultural land, or vacant plot	Sharecropper(s)	<ul style="list-style-type: none"> <li>60 days advance notice to harvest standing seasonal crops, if harvest is not possible, compensation for share of crops (item 4)</li> <li>Additional compensation for vulnerable households (item 5)</li> </ul>	<ul style="list-style-type: none"> <li>Work schedule to allow harvesting prior to acquisition and avoid harvest season</li> <li>Vulnerable households to be identified during DMS conducted as part of the resettlement plan</li> </ul>	<ul style="list-style-type: none"> <li>Verification of people affected by ward commissioner</li> </ul>
1d	Loss of land	Homestead land, agricultural land, or vacant plot	People affected without holding numbers (squatter(s) and encroacher(s))	<ul style="list-style-type: none"> <li>60 days advance notice to shift from occupied land</li> <li>Additional compensation for vulnerable households (item 5)</li> </ul>	<ul style="list-style-type: none"> <li>Vulnerable households to be identified during DMS conducted as part of the resettlement plan</li> </ul>	<ul style="list-style-type: none"> <li>Verification of people affected by ward commissioner</li> </ul>
2a	Loss of structure	Residential/commercial structure and other assets (e.g., fences, gates, posts)structure	Owner(s) with holding numbers	<ul style="list-style-type: none"> <li>Cash compensation equivalent to replacement value of structure (or part of structure)</li> <li>Option to be compensated for entire structure if remaining structure is no longer viable</li> <li>Rights to salvage materials from structure</li> </ul>	<ul style="list-style-type: none"> <li>Vulnerable households to be identified during DMS conducted as part of the resettlement plan</li> </ul>	<ul style="list-style-type: none"> <li>Verification of people affected by ward commissioner</li> <li>Implementing NGO to determine replacement value in consultation with people affected</li> <li>Pourashava with PIU/PMU</li> </ul>

	Type of Loss	Application	Entitled Person <sup>a</sup>	Compensation Policy	Implementation Issues	Responsible Agency
				<ul style="list-style-type: none"> <li>Free transport facility or shifting assistance</li> <li>Provision of all taxes, registration costs, and other fees incurred for replacement structure</li> <li>Subsistence allowance of Tk3,000 based on Tk100/day</li> <li>Additional compensation for vulnerable households (item 5)</li> </ul>		<ul style="list-style-type: none"> <li>assistance to determine viability of remaining structure</li> <li>PIU/PMU to determine shifting assistance, verify all charges.</li> </ul>
2b	Loss of structure	Residential/commercial structure and other assets (e.g., fences, gates, posts)structure	Tenant(s) and leaseholder(s)	<ul style="list-style-type: none"> <li>Cash compensation equivalent to replacement value of structure (or part of structure) constructed by the person affected</li> <li>Rights to salvage materials from structure</li> <li>Free transport facility or shifting assistance</li> <li>Provision of all taxes, registration costs, and other fees incurred for replacement structure</li> <li>Subsistence allowance of Tk3,000 based on Tk100/day</li> <li>Additional compensation for vulnerable households (item 5)</li> </ul>	<ul style="list-style-type: none"> <li>Vulnerable households to be identified during DMS conducted as part of the resettlement plan</li> <li>Structure owners will reimburse tenants and leaseholders rental deposit or unexpired lease,</li> </ul>	<ul style="list-style-type: none"> <li>Verification of people affected by ward commissioner</li> <li>Implementing NGO to determine replacement value in consultation with person affected</li> <li>Pourashava with PIU/PMU assistance to determine viability of remaining structure</li> <li>PIU/PMU to determine shifting assistance, verify all charges.</li> <li>Pourashava with PIU/PMU ensure tenants and leaseholders receive reimbursement for rental deposit or unexpired lease</li> </ul>
2c	Loss of structure	Residential/commercial structure and other assets (e.g., fences, gates, posts)structure	Encroacher(s) and squatter(s)	<ul style="list-style-type: none"> <li>Cash compensation equivalent to replacement value of structure (or part of structure) constructed by the person affected</li> <li>Rights to salvage materials from structure</li> <li>Free transport facility or shifting assistance</li> <li>Provision of all taxes, registration costs, and other fees incurred for replacement structure</li> <li>Subsistence allowance of Tk3,000 based on Tk100/day</li> <li>Additional compensation for vulnerable households (item 5)</li> </ul>	<ul style="list-style-type: none"> <li>Vulnerable households to be identified during DMS conducted as part of the resettlement plan</li> </ul>	<ul style="list-style-type: none"> <li>Verification of people affected by ward commissioner</li> <li>Implementing NGO to determine replacement value in consultation with person affected</li> <li>Pourashava with PIU/PMU assistance to determine viability of remaining structure</li> <li>PIU/PMU to determine shifting assistance, verify all charges.</li> </ul>
3	Loss of livelihood	Livelihood and/or source of income	Business owner (s), tenant (s), leaseholder(s), employee(s), agricultural worker(s), hawker(s)/vendors(s)	<ul style="list-style-type: none"> <li>Assistance for lost income based on 3 months lost income or minimum wage rates.</li> <li>Additional compensation for vulnerable households (item 5)</li> </ul>	<ul style="list-style-type: none"> <li>Vulnerable households to be identified during DMS conducted as part of the resettlement plan</li> </ul>	<ul style="list-style-type: none"> <li>Verification of people affected by ward commissioner</li> <li>PIU/PMU to determine income loss/minimum wage during detailed socioeconomic surveys conducted as part of the resettlement plan</li> </ul>
4	Loss of crops and trees	Standing crops and trees	Owner(s) with holding number, tenant(s), leaseholder(s), sharecropper(s), encroacher(s), squatter(s)	<ul style="list-style-type: none"> <li>60 days advance notice to harvest standing seasonal crops, if harvest is not possible, cash compensation for crops (or share of crops) equivalent to prevailing market price</li> <li>Cash compensation for perennial crops</li> </ul>	<ul style="list-style-type: none"> <li>Work schedule to allow harvesting prior to acquisition and avoid harvest season</li> <li>Market value to be</li> </ul>	<ul style="list-style-type: none"> <li>Verification of people affected by ward commissioner</li> <li>Implementing NGO to determine market values with assistance from agriculture/horticulture expert</li> </ul>

	Type of Loss	Application	Entitled Person <sup>a</sup>	Compensation Policy	Implementation Issues	Responsible Agency
				and fruit-bearing trees based on annual net product market value multiplied by remaining productive years <ul style="list-style-type: none"> <li>• Cash compensation equivalent to prevailing market price of timber for nonfruit trees</li> </ul>	determined	
5	Impacts on vulnerable people affected	All impacts	Vulnerable people affected <sup>b</sup>	<ul style="list-style-type: none"> <li>• Land-for-land option will be an option for vulnerable people affected</li> <li>• Additional allowance equivalent to Tk3,000 for loss of land or structure</li> <li>• Vulnerable households will be prioritized in and employment required for the Project</li> </ul>	<ul style="list-style-type: none"> <li>• Vulnerable households to be identified during DMS conducted as part of the resettlement plan</li> <li>• Land title will be to both husband and wife.</li> </ul>	<ul style="list-style-type: none"> <li>• Verification of people affected by ward commissioner</li> </ul>
6	Temporary loss of land	Land temporarily acquired for the Project	Owner(s) with holding number, tenant(s), leaseholder(s), sharecropper(s), encroacher(s), squatter(s)	<ul style="list-style-type: none"> <li>• 60 days advance notice</li> <li>• Provision of land rental value during the duration of temporary acquisition</li> <li>• Restoration of affected land</li> </ul>		<ul style="list-style-type: none"> <li>• Verification of people affected by ward commissioner</li> <li>• Pourashava with PIU/PMU to determine rental values in consultation with those affected</li> <li>• Restoration as part of contractors contract</li> </ul>
	Temporary loss of access	Temporary loss of access to land, structure, utilities, common property resource	Owner(s) with holding number, tenant(s), leaseholder(s), sharecropper(s), encroacher(s), squatter(s)	<ul style="list-style-type: none"> <li>• 60 days advance notice</li> <li>• Provision of temporary access (e.g., planks across pipe trench) where possible</li> <li>• Restoration/enhancement of affected land, structure, utilities, common property resource</li> </ul>		<ul style="list-style-type: none"> <li>• Verification of people affected by ward commissioner</li> <li>• Restoration as part of contractors contract</li> </ul>
7	Temporary loss of livelihood	Temporary loss of livelihood and/or source of income	Business owner(s), tenant(s), leaseholder(s), employee(s), agricultural worker(s), hawker(s)/vendors(s)	<ul style="list-style-type: none"> <li>• 60 days advance notice</li> <li>• Provision of temporary access (e.g., planks across pipe trench) where possible</li> <li>• Provision of alternative sites for continued economic activity</li> <li>• Where provision of alternative sites is not feasible, compensation of lost income</li> <li>• Compensation for agricultural losses (item 4)</li> <li>• Restoration of affected land, structure, utilities, common property resource</li> </ul>		<ul style="list-style-type: none"> <li>• Verification of people affected by ward commissioner</li> <li>• PIU/PMU to determine income loss/minimum wage during detailed socioeconomic surveys conducted as part of the resettlement plan</li> <li>• Restoration as part of contractors contract</li> </ul>
8	Any other loss not identified			Unanticipated involuntary impacts will be documented and mitigated based on the principles provided in ADB's involuntary resettlement policy		

ADB = Asian Development Bank, DMS = detailed measurement survey, DPHE = Department of Public Health Engineering, NGO = nongovernment organization, PIU = project implementation unit, PMU = project management unit, RP = resettlement plan.

<sup>a</sup> Identified during cut-off date.

<sup>b</sup> Vulnerable people/groups include households headed by women, households headed by the disabled, households headed by indigenous people, and households living below the poverty line.

Source: Asian Development Bank.