



Technical Assistance Report

Project Number: 41603
July 2008

India: Preparing the Bihar Urban Development Project (Financed by the Japan Special Fund)

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 22 July 2008)

Currency Unit	–	Indian rupee/s (Re/Rs)
Re1.00	=	\$0.022
\$1.00	=	Rs42.73

ABBREVIATIONS

ADB	–	Asian Development Bank
BRJP	–	Bihar Rajya Jal Parshad
CTA	–	component technical assistance
PHED	–	Public Health Engineering Department
PIU	–	project implementation unit
PMU	–	project management unit
PPP	–	public–private partnership
PPTA	–	project preparatory technical assistance
UDD	–	Urban Development Department
ULB	–	urban local body

TECHNICAL ASSISTANCE CLASSIFICATION

Targeting Classification	–	Targeted intervention (MDG)
Sector	–	Water supply, sanitation, and waste management
Subsector	–	Water supply and sanitation
Themes	–	Environmental sustainability, capacity development, inclusive social development
Subthemes	–	Urban environmental improvement, institutional development, human development

NOTE

In this report, “\$” refers to US dollars.

Vice-President	L. Jin, Operations Group 1
Director General	K. Senga, South Asia Department (SARD)
Director	H. Kim, Urban Development Division, SARD
Team leader	G. An, Urban Development Specialist, SARD
Team member	R. C. Barba, Safeguards Specialist, SARD

I. INTRODUCTION

1. The Asian Development Bank (ADB) had included in its country operations business plan for 2008–2010 a loan for the Bihar Urban Development Project.¹ Key aspects of the proposed project preparatory technical assistance (PPTA) and the proposed project were discussed with Bihar officials and other stakeholders during the Fact-Finding Mission in March 2008, which coincided with the review of the ongoing component technical assistance (CTA) for the Bihar Urban Sector Project (under the technical assistance cluster for project processing and capacity development).² A consensus was reached in principle on the purpose, scope, implementation arrangements, costs, financing arrangements, and terms of reference for the PPTA. The PPTA³ framework is in Appendix 1. The concept was reviewed and approved by ADB's Management on 24 April 2008.

II. ISSUES

2. India has urbanized rapidly in the last few decades as its economy has grown. Its urban population is now the second largest in the world, after that of the People's Republic of China. Three of the world's 10 largest cities are in India, where about 11% of urban growth worldwide is occurring. The contribution of urban areas to the Indian economy has also increased dramatically, and now accounts for 60% of gross domestic product—urban India is the country's engine of growth. However, despite their economic prominence, the urban areas are faced with serious deterioration in the physical environment and poor services. Explosive urban growth without adequate capital investments has resulted in severe deficiencies in infrastructure. Weak capacity among the service providers, coupled with a slow-developing municipal management system, contributes to poor urban service delivery.

3. The Government of India has recently strived to give importance to the urban sector and improve urban infrastructure and services through institutional and financial interventions. The 74th Constitution Amendment Act laid the foundation for a new approach to urban management and governance by handing the responsibilities over to the local governments. The 10th Five-Year Plan (FY2002–FY2006) and 11th Five Year Plan (FY2007–FY2011), with their emphasis on investments in social infrastructure, added momentum to the urban sector reforms. However, such government efforts have not been able to meet the demand for urban services, which far outstrips supply and municipal capacity. As a result, urban households, particularly the poor and disenfranchised, still have limited access to urban services such as water, sanitation, and solid waste management.

4. With a population of about 83 million, 8.1% of India's population, the state of Bihar is the third most populous state in India. Its gross population density, at 881 persons per square kilometer, is one of the highest in the country. But the state, predominantly agriculture-based,

¹ Previously called the Bihar Urban Infrastructure Development Sector Program. The change in title reflects the change in mode of financing, from multitranches financing facility to project loan in consultation with the Executing Agency and the Department of Economic Affairs of the Government of India.

² Approved in June 2007 by the director general of the South Asia Department and begun in September 2007, the \$450,000 Bihar CTA is ADB's response to the Bihar government's request for support for its policy of socioeconomic development for the state. The CTA also supports the ongoing application of the Patna city corporation for grant funds from the Jawaharlal Nehru National Urban Renewal Mission and the preparation of an urban sector road map for two main cities in the state, Patna and Gaya.

³ The TA first appeared in the business opportunities section of ADB's website on 16 May 2008.

has been mired in very slow economic growth⁴ over the last few decades and is India's least urbanized. According to the 2001 census, Bihar had an urban population of only 8.68 million, or 10.46% of the total population, versus the national average of 28%. About 60% of this urban population is in the southern part of the state, with a significant concentration in Patna, and more than 50% is in class I towns (towns with a population of more than 100,000; Bihar had 19 of these in the 2001 census), thus putting concentrated pressure on those towns.

5. Infrastructure and urban services in the state's urban local bodies (ULBs) are generally poor and inadequate. In the water sector, the Public Health Engineering Department (PHED) and Bihar Rajya Jal Parshad (BRJP) create water and sewerage infrastructure assets, which are operated and maintained by the ULBs. Groundwater is a major source of water in the state. The water sector is beset with a host of problems. Piped water supply is low—about 40% of the population of Patna and Gaya, Bihar's two largest ULBs, rely on private tube wells or public stand posts—and the extension of the distribution networks lags behind the growth in the urban population. Large quantities of water are lost to leaks: unaccounted-for water is estimated at more than 40%. There is no accurate database of distribution systems and condition of pipes in any of the ULBs, making system operation and maintenance much more difficult.

6. Of all the ULBs in Bihar, only Patna has a sewerage system covering 18% of the town area. In the other ULBs and the unsewered part of Patna, most houses have septic tanks, from which effluent flows into soak pits or roadside municipal drains. Open defecation is common and causes risks to public health and the environment. The wastewater is intercepted at the outfall of drains or sumps of pumping stations, but about 30% of the pumps are not working. The sewage treatment plants in Patna, which were built in the late 1980s, are now running at only about 65% of their designed capacity and are in urgent need of repair and upgrading.

7. Although municipal solid waste management is a mandatory function of the ULBs, a significant volume of the waste produced in the state is left unattended. Only 55% of the 680 tons of solid waste generated daily in Patna and only 60% of the 200 tons in Gaya is collected. And even this is dumped openly into low-lying areas or along the main corridors. None of the ULBs in the state have a proper disposal facility or sanitary landfill.

8. The state has yet to prepare a statement of its urban policy or strategy. Without such a unified policy document, urban sector works have been fragmentary and have been undertaken by different agencies without close alignment of resources, resulting in grossly inadequate and inefficient urban development. Despite the breakthrough Bihar Municipal Act introduced by the state in 2007, fully empowering the ULBs to provide all urban services and recover costs, nonmunicipal agencies (PHED and BRJP) retain control of typical municipal functions such as the creation of water supply and sewerage systems. Besides, the ULBs have very low technical, financial, and institutional and management capacity and need extensive strengthening, along with immediate financial reforms, to fulfill their mandate under the Municipal Act.

9. In this context, a study was made of the state's urban sector and a sector road map for Patna and Gaya was prepared under the Bihar CTA. The study assessed the urban infrastructure and urban service conditions, consumer patterns, and institutional capacity of service providers, and identified the priority areas requiring policy, technical, and financial intervention. The draft final report, submitted recently, outlined the basic urban infrastructure requirements of Bihar's two largest cities, which are development priorities for the next 7–15 years. The study also found substantial need for developing the institutional capacity of the state and its ULBs to heighten the beneficial effects of infrastructure development as well as the efficiency and effectiveness of urban planning, development, and management. The findings led

⁴ The state's per capita gross state domestic product in 2004 was Rs9,600, lowest among all states of India. The average per capita gross domestic product in India that year was Rs31,605.

to an agreement to phase ADB's investment in the urban sector of Bihar to ensure that the executing and implementing agencies have the capacity to implement and replicate the investment project. The PPTA will verify the findings of the Bihar CTA and finalize the detailed scope for the first externally funded urban project in the state, covering limited subsectors such as water supply and sewerage in Patna and Gaya.

10. Previous ADB urban sector projects in India started up only after significant delay because of insufficient groundwork for the establishment of the project management structure and subsequent delay in the field works. In light of the strong emphasis placed by the Government of India on project readiness, the PPTA will facilitate Bihar's project preparatory activities to maximize its project readiness and ensure the success of this first focused external urban sector intervention in the state as a showcase for future projects.

11. The prospective executing and implementing agencies have very little experience in processing or implementing projects funded by external development agencies. The long-term sustainability of assets and service delivery requires extensive development of state as well as local capacity. The PPTA and the ensuing project, after a careful assessment of the capacity of each institution against its role and responsibilities in urban services delivery, will assist the agencies in building their technical and planning capacity, and support institutional strengthening, financial reform, and the establishment of a geographic information system and management information system.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

12. The proposed project will improve living conditions and the urban environment in the selected city corporations in the state of Bihar. The desired outcome of the PPTA will be a feasible investment project in the urban sector of the state, to be financed with a loan from ADB, and shortened preparatory time for project implementation.

13. The outputs of the PPTA will be as follows:

- (i) A feasible urban infrastructure development project to be financed by ADB;
- (ii) Better preparedness for project implementation;
- (ii) Capacity-building packages to make project management and implementation more timely and effective; and
- (iv) An identified public-private partnership (PPP) component with an assessment of its feasibility.

B. Methodology and Key Activities

14. The PPTA will support (i) a study on a feasible investment package for ADB financing, (ii) improvements in project management and implementation capacity in the executing and implementing agencies, and other preparatory activities to enhance readiness for loan implementation, and (iii) a study on the feasibility of PPP in urban service delivery in Bihar.

15. The PPTA will produce an assessment of the technical, economic, financial, social, and environmental feasibility of the identified investment project for ADB financing, taking into account the Bihar CTA findings and the sector road map for the state. It will also evaluate the financial capacity of the executing agency according to ADB guidelines. All documents required by ADB for loan processing will be prepared. To ensure the long-term financial sustainability of

the assets created by the investment project, an appropriate customer tariff structure and a target tax collection rate will be assessed and designed.

16. The PPTA will also assist the government of Bihar in (i) setting up project management and implementation units (PMU and PIUs) in the executing and implementing agencies and other coordination committees as required; (ii) preparing project implementation documents, such as contract packages, a procurement plan, and various standard bid documents, and carrying out advance action for project consultant and contractor selection, surveys, investigations, and baseline data preparation, to increase project readiness and jump-start the implementation when the ensuing loan takes effect; and (iii) assessing the capacity of urban service providers and starting some capacity enhancement activities, including the training of PMU and PIU staff in ADB procedures and policies.⁵

17. With respect to the development of PPP options for the project city corporations, the alternatives for urban service outsourcing and strengthening through PPP will be analyzed wherever possible. The PPTA will further support the structuring, packaging, and implementation of the most feasible PPP option in the state's urban services, in parallel with its support for the capacity development and institutional strengthening of the government agencies.

C. Cost and Financing

18. The total cost of the PPTA is estimated at \$1,250,000. At the request of the government of Bihar, ADB will finance \$1,000,000 of this amount with a grant from the Japan Special Fund, funded by the Government of Japan. The Bihar government will finance the remaining \$250,000 by providing counterpart staff, office accommodation, and transport and covering other miscellaneous expenditures. The government has been informed that approval of the TA does not commit ADB to finance any ensuing loan project. Details of the cost estimates and the financing plan are in Appendix 2.

D. Implementation Arrangements

19. The Urban Development Department (UDD) of Bihar will be the Executing Agency for the PPTA. The PMU, once established, will be the Implementing Agency and the core agent in implementing the activities envisaged under the PPTA. The PMU will be based in Patna and will be headed by a project director. A high-level interdepartmental project advisory committee under the state's development commissioner will be established to guide the project preparation and coordinate the stakeholders involved in urban services. Similarly, city committees will also be established to coordinate the PPTA activities.

20. The PPTA will be implemented over 24 months, from September 2008 to August 2010. Individual international (8 person-months) and national (69) consultants will be hired according to ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time). For continuity with the works that have been performed well under the Bihar CTA, a number of individual consultants from the CTA will continue to conduct the works under the PPTA. A water sector specialist (5 person-months) and a PPP transaction expert (3) will be hired as international consultants. The national individual consultants will be as follows: a project management specialist and team leader (13 person-months), an institutional specialist (5), a water supply specialist (6), a sewerage specialist (6), a procurement specialist (5), a financial management and accounting specialist (4), a project economist (3), municipal engineers (8), a

⁵ Including ADB's safeguards policies.

wastewater process specialist (2), an environmental specialist (2), a social and community development specialist (4), an electrical and instrumentation specialist (2), a mechanical engineer (2), a structural engineer (1), and a PPP specialist (6). Personnel support for the surveys, data collection, and information technology and other technical support will be provided to the consultants as required. The team leader will coordinate the activities and inputs to the required reports and deliverables, and conduct the surveys and data collection. Outline terms of reference for the consultants are in Appendix 3. Equipment⁶ will be procured by the consultants according to ADB's *Procurement Guidelines* (2007, as amended from time to time). Appendix 4 contains the summary initial poverty and social analysis report.

21. To facilitate implementation, the PPTA will use an advance payment facility for training, seminars, workshops, other capacity development programs, surveys, equipment, and miscellaneous administration and support costs. The advance payment facility, to be agreed on between ADB and the UDD, will detail the procedures and implementation arrangements for its use, and its liquidation and replenishment requirements, in accordance with ADB's *Technical Assistance Disbursement Handbook* (2008, as amended from time to time).

22. The PPTA consultants will submit the following reports: (i) an inception report with a detailed work plan, within the first month; (ii) an interim report with detailed studies of the subprojects and the feasibility reports, by the end of the seventh month; (iii) a draft final report, by the end of the 13th month; and (iv) a final report, by the end of the 17th month.

IV. THE PRESIDENT'S DECISION

23. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$1,000,000 on a grant basis to the Government of India for preparing the Bihar Urban Development Project, and hereby reports this action to the Board.

⁶ Five computers, three printers, and a copier, facsimile machine, and scanner. All equipment purchased under the TA will be turned over to UDD after the PPTA.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p>Impact Improved living conditions and urban environment in the selected project CCs in Bihar</p>	<ul style="list-style-type: none"> ▪ 30% increase in access to sustainable urban services for the residents of project CCs by 2017 ▪ Sustenance of urban services at O&M cost recovery by 2014 ▪ Trained and adequately resourced city corporations and state entities capable of providing sustainable urban services to their residents by 2014 	<ul style="list-style-type: none"> ▪ Bihar gov't health statistics and project CC financial and other data 	<p>Assumption</p> <ul style="list-style-type: none"> ▪ Continued support and commitment from the Bihar government <p>Risk</p> <ul style="list-style-type: none"> ▪ Political stability during the project period ▪ Unwillingness of the Bihar government and the project CCs to charge the service tariffs
<p>Outcome Successful creation of a feasible investment project for the urban sector in the state of Bihar to be financed with an ADB loan, and shortened preparatory time for project implementation</p>	<ul style="list-style-type: none"> ▪ Timely processing of the ensuing loan according to the COBP for India ▪ Contract awarded within 3 months of loan effectiveness 	<ul style="list-style-type: none"> ▪ ADB's periodic project monitoring, review, and project completion reports ▪ Bihar government's and project CCs' annual and other reports 	<p>Assumption</p> <ul style="list-style-type: none"> ▪ A fully empowered PMU and institutional reforms in the project CCs <p>Risk</p> <ul style="list-style-type: none"> ▪ Frequent change of officials and inadequate human resources in the project CCs
<p>Outputs 1. An agreed design for a feasible urban infrastructure development project for ADB financing</p> <p>2. Project ready for implementation according to the project readiness checklist agreed on with the Government of India</p>	<ul style="list-style-type: none"> ▪ Study of the technical, economic, financial, social, and environmental feasibility of the identified investment project according to ADB guidelines completed by April 2009 ▪ Financial management capacity of the EA assessed according to ADB guidelines by April 2009 ▪ Suitable tariff structure and target tax collection rate formulated by July 2009 ▪ PMU, PIUs, and project governance/steering committees established, fully staffed, and functional by November 2008 ▪ Procurement plan detailing contract packages and modes of procurement prepared by April 2009 ▪ Standard bidding documents for works and goods prepared by July 2009 ▪ Consulting contract for loan project completed by March 2010 	<ul style="list-style-type: none"> ▪ PPTA consultants' reports ▪ ADB review mission reports ▪ Project CCs' annual accounting report ▪ Organogram of PMU and PIUs ▪ Procurement documents submitted to ADB 	<p>Assumptions</p> <ul style="list-style-type: none"> ▪ Prompt fielding of PPTA consultants ▪ Continued full support from Bihar government and project CCs <p>Risks</p> <ul style="list-style-type: none"> ▪ Change in political situation ▪ Inadequate staffing and frequent change in PMU/EA

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p>3. Capacity-building packages for the project CCs</p> <p>4. Feasible PPP component</p>	<ul style="list-style-type: none"> ▪ Surveys and baseline map completed by July 2009 ▪ Tendering process completed and ready for awarding for at least 30% of works and equipment purchases by August 2010 ▪ Detailed assessment of required capacity enhancement, institutional streamlining, and reforms completed by April 2009 ▪ Initial training and capacity-building activities in the project CCs and state-level entities started by June 2009 ▪ Feasibility study of a PPP approach to urban service delivery in the project CCs, including outline of the proposed type of contract, completed by March 2010 		
<p>Activities with Milestones</p> <p>1.1 PPTA consultants mobilized by 30 September 2008</p> <p>1.2 Inception report submitted by consultants by 31 October 2008</p> <p>1.3 PMU and PIUs set up and fully operational by 31 November 2008</p> <p>1.4 Interim report, including feasibility reports, submitted by consultants by 31 March 2009</p> <p>1.5 Documents for short listing of loan consultants and contractors finalized by 31 March 2009</p> <p>1.6 Surveys and baseline map completed by 31 July 2009</p> <p>1.7 RFP for loan consultants issued by 31 July 2009</p> <p>1.8 Draft final report submitted by consultants by 30 September 2009</p> <p>1.9 Loan fact-finding mission fielded by 31 January 2010</p> <p>1.10 Loan appraisal mission fielded by 31 May 2010</p> <p>1.11 Loan negotiation completed by 30 September 2010</p> <p>1.12 Loan approved by 31 January 2011</p>		<p>Inputs</p> <ul style="list-style-type: none"> ▪ Consulting services ▪ ADB: \$1.0 million ▪ GOB: \$0.25 million 	

ADB = Asian Development Bank, CC = city corporation, COBP = country operations business plan, EA = executing agency, O&M = operation and maintenance, PIU = project implementation unit, PMU = project management unit, PPP = public-private partnership, PPTA = project preparatory technical assistance, RFP = request for proposal.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Total Cost
A. Asian Development Bank (ADB) Financing^a	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	172.80
ii. National Consultants	510.60
b. International and Local Travel	54.90
c. Reports and Communications	10.00
d. Local Transport	15.00
2. Equipment (computer, printer, etc.) ^b	20.00
3. Workshops, Training Seminars, and Conferences ^c	
a. Workshops	10.00
b. Training Program	15.00
4. Vehicle ^d	18.20
5. Surveys	100.00
6. Miscellaneous Administration and Support Costs	15.00
7. Representative for Contract Negotiations	3.00
8. Contingencies	55.50
Subtotal (A)	1,000.00
B. Government Financing	
1. Office Accommodation and Transport	150.00
2. Remuneration and Per Diem of Counterpart Staff	100.00
3. Others	0.00
Subtotal (B)	250.00
Total	1,250.00

^a Financed by the Japan Special Fund, funded by the Government of Japan.

^b Five computers, three printers, and one copier, facsimile, scanner each will be purchased by the consultants according to ADB's *Procurement Guidelines* (2007, as amended from time to time). All equipment purchased under the technical assistance will be turned over to the Executing Agency after the project preparatory technical assistance.

^c Training and benchmarking conferences, and workshops will be organized to build capacity and share information among stakeholders

^d Rental of vehicles for the consultants in the field.

Source: ADB estimates.

TERMS OF REFERENCE FOR CONSULTANTS

1. The project preparatory technical assistance (PPTA) will be implemented over 24 months, from September 2008 to August 2010. A total of 77 person-months of consulting services (8 person-months international and 69 national) is anticipated. Support personnel for surveys, data collection, and information technology and other technical support will also be provided to the consultants as required. The Asian Development Bank (ADB) will select and hire individual consultants according to its *Guidelines on the Use of Consultants* (2007, as amended from time to time).

2. Consultants will be hired under the PPTA to undertake the following key activities:

- (i) Prepare a feasibility study for an investment package for ADB financing.
- (ii) Provide support to improve project management and implementation capacity and assist the relevant agencies in conducting preparatory activities to enhance their readiness to implement the forthcoming loan.
- (iii) Explore the feasibility of public-private partnership (PPP) in urban service delivery in the state.

3. The specific tasks of the individual consultants will be as follows.

1. **Water Sector Specialist** (international, 5 person-months)

- (i) Prepare detailed work plans for the team and the schedule of deliverables for the PPTA in consultation with the team leader and the Executing Agency, the Urban Development Department (UDD) of Bihar.
- (ii) Guide the urban sector review and the analysis of the technical, institutional, economic, and financial feasibility of the identified subprojects.
- (iii) Provide close guidance and coordination to the PPP specialists in identifying the subprojects and areas or subsectors to be selected for PPP contract preparation.
- (iv) Assist ADB's project officer in preparing all the necessary documentation required to process the project according to ADB's policies and guidelines.

2. **PPP Transaction Expert** (international, 3 person-months)

- (i) Support the government agencies in developing an overall strategy for contracting, structuring the scope, timing, and packaging the PPP schemes.
- (ii) Identify the capacity development needs of the government agencies for dealing with PPP contracts with the private sector.
- (iii) Coordinate with the PPTA consultants, relevant government agencies, and ADB regarding the requirements and conditions for successful PPP, and hold coordination meetings with relevant government agencies and other stakeholders as required.
- (iv) Verify the consistency of the proposed PPP option with the regulatory and institutional frameworks, or suggest regulatory or institutional changes to facilitate the introduction of PPP.
- (v) Prepare a draft request for proposal for the proposed PPP option, and develop key performance indicators for PPP in coordination with other consultants.
- (vi) Advise, coordinate with, and guide the national PPP consultant in the latter's inputs and outputs.

3. Project Management Specialist and Team Leader (national, 13 person-months)

- (i) Lead the team of consultants in analyzing the technical, institutional, economic and financial, social, and environmental feasibility of the proposed project, and take overall responsibility in delivering the outputs required under the PPTA.
- (ii) Assess the capacity of the executing and implementing agencies to manage the activities for the ensuing loans, and identify the capacity-building needs for the timely and effective implementation of the proposed loan project as well as the urban reform agenda linked to the project.
- (iii) Assist the UDD in forming the project management unit (PMU) and the project implementation units (PIUs), drawing the required personnel for the PMU from various state departments and parastatal agencies.
- (iv) Assist the UDD in establishing a procurement management system based on ADB's guidelines including procedures for tendering, prequalification of civil works contractors, and preparation of suitable contract packages and standard bidding documents.
- (v) Assist the UDD in establishing a financial management and accounting system including a budgeting and control system and a system for the audit of project accounts, and in implementing financial and accounting reforms in the selected project cities.
- (vi) Develop and coordinate training and capacity-building programs for key staff to familiarize them with ADB procedures and develop their capacity to undertake project management activities effectively.
- (vii) Assist the UDD in all activities related to project preparedness such as the preparation of all documentation for the recruitment of consultants, public relations and awareness campaigns, and support for institutional and financial reforms.

4. Water Supply Specialist (national, 6 person-months)

- (i) Review and verify data and information on the water supply and sewerage systems proposed under the Bihar component technical assistance (CTA).
- (ii) Plan and supervise surveys to identify the location and assess the condition of surface and groundwater sources, pumping stations and treatment plants, reservoirs, and distribution and transmission mains; and prepare water supply distribution network maps to scale and preferably geo-coordinated for future use in a geographic information system.
- (iii) Conduct a leak detection survey with appropriate and suitable methodology and prepare a rectification program for the identified subprojects.
- (iv) Calculate the size of the population (resident and floating) vis-à-vis water demand in the two project towns in the current and design periods, and identify the shortfall.
- (v) Undertake computer analysis of the water supply network on the basis of current and designed demand; conduct a water supply and power audit to identify hydraulic constraints and recommend a rectification program to optimize supply.
- (vi) Review the performance of waterworks and suggest modifications or rehabilitation measures to optimize their capacity.
- (vii) Determine, in association with the PPP specialists, the potential for PPP in water services under the PPTA.
- (viii) Finalize the scope of the support and feasibility reports under the proposed project and recommend a demand-based water utility management system with the necessary reforms.

5. Sewerage Specialist (national, 6 person-months)

- (i) Assess in detail the sewerage sector needs identified by the Bihar CTA and prepare and finalize the feasibility report on sewerage sector improvements in the selected cities under the PPTA.
- (ii) Conduct a topographic survey and investigations as required to complete the feasibility studies on the sewerage subproject in Patna in particular.
- (iii) Prepare preliminary designs, cost estimates, and standard contract documents for the identified subprojects, with the assistance of municipal engineers, to be included by UDD in the pilot bidding document for the sewerage subproject.
- (iv) Determine, in association with the PPP specialists, the potential for private sector participation in the operation, maintenance, and management of the sewage treatment plants in the selected cities under the PPTA.

6. Wastewater Treatment Process Specialist (national, 2 person-months)

- (i) Plan and organize wastewater sampling and analysis, to determine the concentration and volume of wastewater now discharged, and a sampling and analysis program for the receiving water body after wastewater treatment.
- (ii) Identify the areas in the sewage treatment plant and pumping stations that require capital reinvestments.
- (iii) Prepare preliminary designs and drawings and assist the UDD in preparing model or sample contract documents for the sewerage subproject with the assistance of the municipal engineers.
- (iv) Review the location of the site for the proposed sewage treatment plants with respect to size and environmental parameters and develop the most appropriate, cost-effective technology for the plants.
- (v) Assist the environmental specialist in preparing applicable documents required under the policies of the Government of India as well as ADB for the subprojects.

7. Environment Specialist (national, 2 person-months)

- (i) Conduct all preparatory surveys and studies and gather information for the environmental assessment reports for the identified subprojects.
- (ii) Assess the environmental categorization of the proposed project as a whole and all subprojects.
- (iii) Assist the PMU in conducting an environment assessment including the attendant public consultations, and in incorporating identified mitigation measures into the project documents.
- (iv) Assist the PMU in preparing environmental assessment documents such as initial environmental examinations and environmental impact assessments as appropriate, according to the requirements and standards of ADB, the Government of India, and the Bihar government, for the environmental assessment of the proposed project and subprojects.
- (v) Assist the UDD in preparing applications for environmental clearance from the State Pollution Control Board for the subprojects.

8. Procurement Specialist (national, 5 person-months)

- (i) Assist the project management specialist and team leader in procurement management.
- (ii) Assist in contract packaging and procurement planning under the PPTA.
- (iii) Assess the need for consulting services for project implementation and assist the UDD in preparations for the procurement of those consultants' services, including the preparation of the request for proposal and evaluation criteria, and the evaluation of proposals, all according to ADB guidelines.
- (iv) Prepare sample standard bidding documents for all selected subprojects under the proposed project and special sections as required.
- (v) Provide on-the-job training in procurement to PMU and PIU staff to familiarize them with ADB's procurement procedures, and undertake procurement workshops.
- (vi) Provide inputs to the PPP specialist regarding procurement issues.
- (vii) Assist the sector specialists in obtaining and updating the schedule of rates available at various departments of the Bihar government, as well as in collecting market rates, determining workable rates, and preparing estimates and a bill of quantities.

9. Mechanical Engineer (national, 2 person-months)

- (i) Visit all the water supply and sewerage installations and evaluate all their mechanical components to determine the rehabilitation or replacement needs.
- (ii) Provide guidance to the government agencies in standard maintenance practices.
- (iii) Prepare preliminary designs of materials and workmanship required for the works, including cost estimates and associated contract documents to be included in the sample bidding document for selected subprojects.

10. Electrical and Instrumentation Engineer (national, 2 person-months)

- (i) Visit all the water supply and sewerage installations and evaluate all their electrical and instrumentation components to determine the rehabilitation or replacement needs.
- (ii) Provide guidance to the government agencies in standard maintenance practices.
- (iii) Prepare preliminary designs of materials and workmanship required for the works, including cost estimates and associated contract documents to be included in the sample bidding document for selected subprojects.

11. Structural Engineer (national, 1 person-month)

- (i) Visit all the water and sewerage installations and assess their structural rehabilitation requirements.
- (ii) Evaluate the results of the geo-technical investigation and design all the overhead reservoirs, including cost estimates and associated contract documents to be included in the sample bidding document.

12. Institutional Specialist (national, 5 person-months)

- (i) Review the project implementation arrangement recommended in the Bihar CTA and discuss it with relevant agencies of the Bihar government to finalize the action plan.
- (ii) Assist the project management specialist and team leader in forming the PMU and PIUs, drawing staff from different state authorities and parastatal agencies like Bihar Rajya Jal Parshad and the Public Health Engineering Department to establish a complete structure, and in forming of different state and ULB committees.
- (iii) Assess the capacity of each government agency and propose its capacity development needs vis-à-vis its responsibility for urban service provision.
- (iv) Provide guidance to the UDD in starting the mandatory institutional reforms required to qualify for funding from the Jawaharlal Nehru National Urban Renewal Mission program. Assist in implementing the time-bound capacity enhancement activities outlined under the PPTA.

13. Financial Management and Accounting Specialist (national, 4 person-months)

- (i) Design an accounting system and assist the PMU and PIUs in implementing it. This system will include funds flow monitoring, accounting and reporting, budgeting and control, and auditing of the project accounts, based on ADB's guidelines and policies.
- (ii) Review the state policies affecting the financial performance of the urban local bodies (ULBs) and identify critical areas for improvement. Provide assistance in property tax and water tariff reforms and improvements in revenue collection efficiencies.
- (iii) Assess the financial management capacity of the UDD according to the ADB guidelines on the financial management and analysis of projects.
- (iv) Conduct training for PMU, PIU, and ULB personnel in double-entry accounting and ADB procedures for disbursements and preparation of claims, maintenance of project accounts, audit of project accounts, and reporting.
- (v) Develop a financial management manual for the PMU, PIUs, and ULBs.

14. Project Economist (national, 3 person months)

- (i) Review the demand and affordability analysis and the methodology used in the economic evaluation and sensitivity analysis of the project components in the sample city corporations under the Bihar CTA.
- (ii) Review the detailed estimates of economic costs and identify all economic benefits, under the with- and without-project scenarios, as well as the incremental and non-incremental benefits.
- (iii) Prepare all the documents required for the economic analyses and other relevant sections in the appraisal documents during loan processing.

15. Social and Community Development Specialist (national, 4 person-months)

- (i) Review the assessment carried out under the Bihar CTA on the social profile, affected and beneficiary population, needs and aspirations of the target population, affordability of the improved services, and the beneficiaries' willingness to pay the tariffs and to contribute to and participate in the formulation, implementation, and operation and maintenance of the subprojects.

- (ii) Assist the PMU in preparing the necessary social impact assessments, as well as full or short resettlement plans and indigenous people development plans, taking into account the applicable laws and national policies of the Government of India and ADB's *Involuntary Resettlement Policy* (1995) and *Policy on Indigenous Peoples* (1998).
- (iii) Conduct the necessary awareness-raising campaign and stakeholder participation workshops to help stakeholders understand and be aware of the social impact of the proposed project and their contribution, opportunities, duties, and responsibilities.
- (iv) Assist the PMU and PIUs in preparing to set up the social safeguards unit to deal with resettlement issues associated with the proposed project.
- (v) Ensure the documentation of mechanisms for public information dissemination, beneficiary consultation, grievance settlement, and public participation.
- (vi) Assess the need for a gender action plan.
- (vii) Prepare reports on the performance and impact of community participation and development activities.

16. PPP Specialist (national, 6 person-months)

- (i) Identify appropriate PPP opportunities and contracting options in the selected urban subsectors in Bihar, in coordination with the sector consultants.
- (ii) Recommend, on the basis of consultations with the relevant stakeholders, the most appropriate partnership option for the selected PPP model.
- (iii) Specify the most appropriate forms of contract and agreement, and prepare outline model drafts for the contract.
- (iv) Provide broad estimates of the costs and benefits for the municipality and the wider community.
- (v) Determine and recommend the appropriate risk sharing between the public and private partners, and performance-indexed incentives.
- (vi) Review the applicable legal and regulatory framework for PPP in the relevant sectors, including procedures for tendering and granting concessions, and recommend any changes needed in the relevant rules and regulations.
- (vii) Provide inputs to the international PPP transaction expert and coordinate with the latter in the preparation of outputs.

17. Municipal Engineers (2 national, 8 person-months total)

- (i) Assist the water supply, sewerage, and wastewater treatment specialists in carrying out all surveys, investigations, and design and documentation activities under the guidance of project management specialist and team leader.
- (ii) Assist the abovementioned specialists and the procurement specialist in preparing all documents required and in the sample technical evaluation of bids.
- (iii) Assist the environment specialist in preparing the application for environmental clearance for the subprojects, and also other experts as necessary.

INITIAL POVERTY AND SOCIAL ANALYSIS

Country/Project Title: India/Bihar Urban Development Project

Lending/Financing Modality: Project Department/Division: South Asian Department/
Urban Development Division

I. POVERTY ISSUES

A. Linkages to the National Poverty Reduction Strategy and Country Partnership Strategy

1. Based on the country poverty assessment, the country partnership strategy and the sector analysis describe how the project would directly or indirectly contribute to poverty reduction and how it is linked to the poverty reduction strategy of the partner country.

The approach paper of the 11th Five-Year Plan shows the Government's continued focus on infrastructure investment, social development, and agriculture and rural development to make growth more inclusive.^a The goal of the proposed project is to improve the living conditions and urban environment by providing sustainable urban infrastructure services. This goal is consistent with the core focus of ADB's assistance strategy, which involves supporting infrastructure development. Support for Bihar, one of the poor states of India, will also augur well for efforts to reduce interstate disparities, as emphasized in the approach paper.

B. Targeting Classification

1. Select the targeting classification of the project:

General Intervention Individual or Household (TI-H); Geographic (TI-G); Non-Income MDGs (TI-M1, M2, etc.)

2. Explain the basis for the targeting classification:

The proposed project will contribute to the achievement of MDG Goal 7 (Ensure Environmental Sustainability) particularly Target 10 (reduce by half the proportion of people without sustainable access to safe drinking water). It is expected to have water supply and sanitation improvement components, which will increase the proportion of the population with sustainable access to an improved water source and to improved sanitation.

C. Poverty Analysis

1. If the project is classified as TI-H, or if it is policy-based, what type of poverty impact analysis is needed? The proposed project is classified as TI-M7.

2. What resources are allocated in the PPTA/due diligence? The PPTA will engage a social safeguards and community development specialist to ensure that resettlement issues are addressed and to strengthen participation in project design.

3. If GI, is there any opportunity for pro-poor design (e.g., social inclusion subcomponents, cross subsidy, pro-poor governance, and pro-poor growth)? The proposed project is classified as TI-M7.

II. SOCIAL DEVELOPMENT ISSUES

A. Initial Social Analysis

Based on existing information:

1. Who are the potential primary beneficiaries of the project? How do the poor and the socially excluded benefit from the project? Primary beneficiaries will be the users of urban services in project-selected areas in Bihar. The proposed project will be designed to ensure that the supported urban services are affordable to the poor. It will also assess the potential for upgrading services in low-income areas and slums.

2. What are the potential needs of beneficiaries in relation to the proposed project? An ADB study shows significant deficiencies in urban water supply, sewerage and sanitation, solid waste management, drainage, and transport infrastructure. Improvements in urban infrastructure services, including an increase in coverage and quality, are needed to improve the living conditions of the potential beneficiaries and the urban environment.

3. What are the potential constraints in accessing the proposed benefits and services, and how will the project address them? The main constraint will be affordability. Once the urban infrastructure is improved, beneficiaries should be able to afford the improved services. The PPTA will include an affordability analysis.

B. Consultation and Participation

1. Indicate the potential initial stakeholders. The primary stakeholders are the residents of the project areas who will benefit from the infrastructure improvements and persons temporarily affected by the construction works. Secondary stakeholders are those in the urban local bodies, local governments, and concerned local agencies; the central Government and concerned central agencies; civil society organizations (including ward committees and NGOs); and ADB.
2. What type of consultation and participation (C&P) is required during the PPTA or project processing (e.g., workshops, community mobilization, involvement of nongovernment organizations and community-based organizations, etc.)? The social safeguards and community development specialist will conduct further stakeholder analysis and consultations, including workshops, focus group discussions, and discussions with key stakeholders.
3. What level of participation is envisaged for project design?
 Information sharing Consultation Collaborative decision making Empowerment⁷
4. Will a C&P plan be prepared? Yes No Please explain. The C&P plan will focus on the participation of residents in ward committees, an information and education campaign in the cities, and community participation and development in the improvement of slum infrastructure.

C. Gender and Development

1. What are the key gender issues in the sector/subsector that are likely to be relevant to this project/program? Men and women differ in access to water and sanitation. In Bihar, in particular, gender disparities are pronounced.
2. Does the proposed project/program have the potential to promote gender equality and/or women's empowerment by improving women's access to and use of opportunities, services, resources, assets, and participation in decision making?
 Yes No Please explain. The proposed project has gender mainstreaming potential, which will be further studied during the PPTA.
3. Could the proposed project have an adverse impact on women and/or girls or to widen gender inequality?
 Yes No Please explain. The proposed project will result in benefits to women that can reduce gender inequality.

III. SOCIAL SAFEGUARD ISSUES AND OTHER SOCIAL RISKS

Issue	Nature of Social Issue	Significant/Limited/ No Impact/Not Known	Plan or Other Action Required
Involuntary Resettlement	Permanent land acquisition is not expected. However, rehabilitation and laying of pipe networks, although to be conducted only on road rights-of-way, can result in temporary loss of income during construction.	Limited.	<input type="checkbox"/> Full Plan <input checked="" type="checkbox"/> Short Plan <input type="checkbox"/> Resettlement Framework <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
Indigenous Peoples	There are no IPs or EM groups in the project areas. This conclusion is supported by census data and confirmed by focus group discussions and transect walks.	No impact.	<input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input type="checkbox"/> Indigenous Peoples Framework <input checked="" type="checkbox"/> No Action <input type="checkbox"/> Uncertain
Labor <input type="checkbox"/> Employment Opportunities <input type="checkbox"/> Labor Retrenchment <input checked="" type="checkbox"/> Core Labor Standards	Issues related to core labor standards will be examined.	Not known.	<input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input type="checkbox"/> No Action <input checked="" type="checkbox"/> Uncertain
Affordability	If the services are unaffordable, full benefits will not be realized. The poor will also be disproportionately affected.	Not known.	<input type="checkbox"/> Action <input type="checkbox"/> No Action <input checked="" type="checkbox"/> Uncertain. An affordability analysis will be undertaken.

Issue	Nature of Social Issue	Significant/Limited/ No Impact/Not Known	Plan or Other Action Required
Other Risks and/or Vulnerabilities <input type="checkbox"/> HIV/AIDS <input type="checkbox"/> Human Trafficking <input type="checkbox"/> Others (conflict, political instability, etc.), please specify:	No other risks or vulnerabilities have been identified.	No Impact	<input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
IV. PPTA/DUE DILIGENCE RESOURCE REQUIREMENT			
<p>1. Do the TOR for the PPTA (or other due diligence) include poverty, social and gender analysis and the relevant specialist/s? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please explain why. These items are in the terms of reference of the social safeguards and community development specialist.</p> <p>2. Are resources (consultants, survey budget, and workshop) allocated for conducting poverty, social and/or gender analysis, and C&P during the PPTA/due diligence? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please explain why. An amount of \$55,000 is budgeted for these purposes.</p>			

ADB = Asian Development Bank, C&P = consultation and participation, EM = ethnic minority, HIV/AIDS = human immunodeficiency virus/acquired immunodeficiency syndrome, IP = indigenous people, NGO = nongovernment organization, PPTA = project preparatory technical assistance, TOR = terms of reference.

^a ADB. 2007. *Country Operations Business Plan: India 2008–2010*. ADB. Manila.