



Design and Monitoring Framework

Project Number: 42265
September 2011

IND: Assam Urban Infrastructure Investment Program

A design and monitoring framework is an active document, progressively updated and revised as necessary, particularly following any changes in project design and implementation. In accordance with ADB's public communications policy (2005), it is disclosed before appraisal of the project or program. This draft framework may change during processing of the project or program, and the revised version will be disclosed as an appendix to the report and recommendation of the President.

Asian Development Bank

DESIGN AND MONITORING FRAMEWORK FOR THE INVESTMENT PROGRAM

Design Summary	Performance Targets/Indicators	Data Sources/ Reporting Mechanisms	Assumptions and Risks
<p>Impact Urban population in relatively poor and weak capacity state (Assam) has improved access to water supply, sanitation, and urban infrastructure facilities.</p>	<p>Improved urban services including 24X7 water supply from 0% in 2011 to more than 95% of population in Guwahati by 2023</p> <p>Improved centralized sewerage treatment from 0% in 2011 to 70% of population in Guwahati by 2023</p> <p>80% of Population in Guwahati and Dibrugarh perceives significant benefits from improved urban infrastructure since 2011</p>	<p>NFHS and DLHS National Sample Survey Organization survey results</p> <p>Customer surveys results from water supply, sewerage, solid waste management, and BRT operators</p>	<p>Assumptions Continued national and state government commitment to urban sector development and reforms. Sustained economic growth in the country and the state of Assam.</p> <p>Risk Political and economic instability.</p>
<p>Outcome Improved and sustainable water supply, sanitation, and urban transport system in the selected project cities in Assam.</p>	<p>Guwahati by 2019 Time spent for collecting water by women and girls in connected households reduced by at least 75% from about 2 hours daily</p> <p>Population with piped sewerage increased from 0% to more than 95% of the population in the south-eastern water supply zone</p> <p>Transport sector CO₂ emissions decrease by 20%</p> <p>Dibrugarh by 2019 Reduction in frequency of major flooding impact from present annual to once in 10 years</p> <p>Increased income for poor households and FHHs by 25% through the processing of solid waste and recyclable products</p>	<p>Baseline and completion socioeconomic surveys. NFHS V and VI data (due every four years).</p> <p>Urban water supply and sanitation improvement program reports/surveys. ULB customer satisfaction surveys. Annual Report by the special purpose vehicle for the BRT component</p> <p>Water resources department annual reports ULB customer satisfaction surveys</p>	<p>Assumptions Continued growth in demand for water supply and sanitation services to achieve full capacity utilization</p> <p>Risks Population and/or traffic growth varies significantly from estimates</p>
<p>Outputs 1. Improved, regular and sustainable metered water supply in Guwahati</p>	<p>By 2018: Guwahati Number of households connected to metered water supply in southeast zone of Guwahati (target: 20% from low-income households,^a and 11% from FHHs)</p> <p>Service coverage with piped water supply increased to more than 90% households in Guwahati (target: 20% from low income households, and 11% from FHHs)</p>	<p>PMU report (sex-disaggregated, poverty vulnerability level categorized baseline data) DLHS</p> <p>National Institute of Urban Affairs surveys on sanitation and water supply DLHS</p>	<p>Assumptions—For Outputs 1-6 Environmental regulations for acceptable practices implemented</p> <p>Tariff reforms and introduction of user charges</p> <p>Risks—For Outputs 1 – 6 There is no bidder interested in the design-build-operate contracts. ULBs are hesitant to adopt user charge plans for water supply and sewerage.</p>

Design Summary	Performance Targets/Indicators	Data Sources/ Reporting Mechanisms	Assumptions and Risks
<p>2. Increased sewerage treatment coverage in the Guwahati</p> <p>3. Improved public transport system through implementation of one BRT corridor in Guwahati</p> <p>4. Solid waste management infrastructure improved in Dibrugarh</p> <p>5. Improved urban drainage system in Dibrugarh</p> <p>6. Project management and implementation skills strengthened in the implementing agencies and ULBs.</p>	<p>User charge plans prepared and submitted for water supply with special subsidized rates for (target: 20% from low income households, and 11% from FHHs)</p> <p>Service area coverage with piped sewerage system increased from current negligible level to 95% in the southeast zone</p> <p>Reduction in travel time along the corridor from an average of 50 minutes to 20 minutes</p> <p>BRT service available along 10.5 km in the city</p> <p>EWCD^b-friendly design features in place in buses and BRT corridors</p> <p>Dibrugarh</p> <p>Solid waste collected up to 80% in service area (target: 12% low income households, and 11% from FHHs)</p> <p>Up to 2,000 women access employment opportunities with equal pay for work of equal value</p> <p>Incidence of street flooding reduced by 20% per year</p> <p>At least 250 ULB staff implementing agency Staff (target: 30% women) trained in social-inclusive and gender responsive O&M services, financial management.</p> <p>Gender and vulnerability O&M manuals informed by gender and social inclusive considerations prepared and disseminated</p> <p>Community awareness campaigns on social/gender and health, sanitation issues conducted in all project city ULBs</p> <p>At least 50% of facilitators and participants in sanitation campaigns are women</p>	<p>NFHS and DLHS</p> <p>State District Urban Development Agency internal monitoring reports</p> <p>STP operators, influent and effluent quality monitoring reports</p> <p>Annual report by the Guwahati Metropolitan Water Supply and Sewerage Board</p> <p>PMU and PIU's project progress report</p> <p>Public transportation department policy briefs</p> <p>Strategic public transportation network and management guidelines and plans</p> <p>Design and tender documents</p> <p>ULB services level sex-disaggregated records</p> <p>Water resources department annual report</p> <p>Baseline and completion socio-economic surveys</p> <p>PMU and PIU's monitoring of project progress</p>	

Activities with Milestones	Inputs						
<p>1.0 Guwahati water supply subproject</p> <p>1.1 Subproject land identified and acquired (Q3 2011)</p> <p>1.2 Detailed designs completed (Q4 2011)</p> <p>1.3 Contracts for river intake, water treatment plant awarded/works completed (Q2 2012-Q4 2014)</p> <p>1.4 Contracts for service reservoirs and allied services awarded/works completed (Q1 2012 - Q4 2014)</p> <p>1.5 Contract for raw water pumping mains and allied works (Q2 2012-Q4 2014)</p> <p>1.6 Distribution of pipelines contracts awarded/works completed (Q2-Q4 2016)</p> <p>1.7 Water meters supplied and installed (Q1 2017-Q3 2017)</p> <p>2.0 Guwahati Sewerage Treatment Subproject</p> <p>2.1 Contracts for STP Zone 1A (South-East) awarded/works completed (Q4 2013-Q3 2017)</p> <p>2.2 Contract for sewerage system for Zone 1 A (South-East) Guwahati awarded/works completed (Q4 2013-Q3 2017)</p> <p>2.3 Sewerage connections to houses completed (Q1 2017-Q3 2017)</p> <p>3.0 Guwahati BRT Subproject</p> <p>3.1 Design and preparatory work for BRTs (Q4 2012)</p> <p>3.2 Subproject land identified and acquired, and affected people compensated and relocated (Q4 2012)</p> <p>3.3 Contract for BRT corridor construction & commissioning awarded/completed (Q1 2014-Q3 2017)</p> <p>4.0 Dibrugarh Solid Waste Management Subproject</p> <p>4.1 Processing plant and sanitary landfill site development including civil, mechanical and electrical works (Q1 2013-Q3 2017)</p> <p>4.2 Equipment & Vehicles for primary collection, secondary transportation for solid waste management (Q1 2015-Q4 2016)</p> <p>5.0 Dibrugarh Drainage Improvement Subproject</p> <p>5.1 Dibrugarh town protection drain rehabilitation with road culvert replacements and flood relief culverts and reconstruction of sluice gates (Q2 2012-Q4 2015)</p> <p>5.2 Dibrugarh main drainage outlet channel rehabilitation and secondary drainage development with allied works (Q2 2013-Q4 2016)</p> <p>6. Urban service delivery management improved</p> <p>6.1 PMU and PIU established (Q2 2011)</p> <p>6.2 PMU and PIU staff participated in ADB's workshop (Q2 2011)</p> <p>6.3 PMC and design supervision consultant engaged (Q4 2011)</p> <p>6.4 Contract management system developed by PMC (Q2 2012)</p> <p>6.5 PMU and PIU staff visited other ADB financed projects in India (Q2 2012)</p> <p>6.6 IPPMS developed by PMC (Q2 2012)</p> <p>6.7 Project website and newsletter prepared by PMU Q3 2012</p>	<p>Investment Program (estimate)</p> <table border="0"> <tr> <td>ADB</td> <td>\$200.0 million</td> </tr> <tr> <td>Government</td> <td>\$85.8 million</td> </tr> <tr> <td>Total</td> <td>\$285.8 million</td> </tr> </table> <p>Cofinancing for Project 2: GEF for the BRT component (estimated at \$5.0 million) AFD for the BRT component (estimated at \$32 million)</p>	ADB	\$200.0 million	Government	\$85.8 million	Total	\$285.8 million
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ADB = Asian Development Bank, BRT = bus rapid transit, DLHS = District-level Household Survey, EWCD = elderly, women, children, disabled, FHH = female-headed households, GMWSSB=guwahati metropolitan water supply and sewerage Board, IPPMS = investment program performance monitoring system, NFHS = National Family Household Survey, O&M = operation and maintenance, PIU = project implementation unit, PMC = project management consultant, PMU = program management unit, STP = sewerage treatment plant, ULB = urban local bodies. Source: Asian Development Bank

^a The Government of India classifies low-income households as those with annual earnings of less than Rs40,000 (i.e. \$896 at 2001–2002 prices).

^b EWCD policies and design features in buses and BRT corridors means the provision and maintenance of a rapid movement strategy and user friendly mobility services targeted at elderly, women, children and the disabled.