



# Draft Design and Monitoring Framework

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## IND: Rajasthan Urban Sector Development Investment Program (Subproject 2)

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

| Design Summary  | Performance Indicators/Targets  | Data Sources/Reporting Mechanisms   | Risks/ Assumptions  |
|---|---|---|---|
| <p><b>Impacts</b><br/>Increased economic growth and sustained improvement in the urban environment and quality of life in the identified urban local bodies (ULBs) in Rajasthan (the Project ULBs).</p>   | <p>By the end of 2016:</p> <ul style="list-style-type: none"> <li>• Urban infrastructure services covered by the Project reaching an additional population in the Project ULBs;</li> <li>• Number of sanitation related diseases in Project ULBs taking up sanitation subprojects decreased; and</li> <li>• Number of population below poverty line (BPL) with access to improved urban infrastructure services in the Project ULBs increased.</li> </ul>   | <ul style="list-style-type: none"> <li>• State and local government statistics;</li> <li>• Census data;</li> <li>• Department of Health of Government of Rajasthan (GoR);</li> <li>• Perception surveys;</li> <li>• Sample surveys of below poverty line; and</li> <li>• Project completion report</li> </ul> | <p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>▪ Macroeconomic stability</li> <li>▪ Continued political support for urban development in Rajasthan.</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>▪ Sustained drought and other natural disasters in Rajasthan</li> </ul>   |
| <p><b>Outcomes</b><br/>Increased access to sustainable urban infrastructure and services for approximately 1.5 million people in the identified 12 Project ULBs by the end of the Project (2013)</p> <p>Improved capacities of, and sustainable management of</p> | <p>By the end of 2013:</p> <p><b>Water Supply:</b></p> <ul style="list-style-type: none"> <li>• 90% population of the Project ULBs (approximately 1.2 million people) are provided with treated piped water supply of 135 litres per capita per day (lpcd);</li> <li>• All connected households in the Project ULBs have water meters;</li> <li>• 100% disinfected water supplied to connected consumers;</li> <li>• All water supply points in the Project ULBs are connected with bulk meters;</li> <li>• Project ULBs have adequate storage facilities for water supply -minimum 20% of supply at the overhead storage reservoirs (OHSRs) and 2 hours supply at the clear water reservoirs (CWRs); and</li> <li>• The unaccounted for water (UFW) in the Project ULBs is reduced by 20%.</li> </ul> <p><b>Sewerage and Sanitation:</b></p> <ul style="list-style-type: none"> <li>• Areas with population density of 150 households/hectare and water supply of 135 lpcd are provided with sewerage facilities including sewage treatment plants (STPs) in selected Project ULBs;</li> <li>• Reduction in the volume of wastewater discharged to water bodies; and</li> <li>• Schools are provided with toilets and water connections where Project related facilities are constructed;</li> </ul> <p><b>Urban Drainage:</b></p> <ul style="list-style-type: none"> <li>• Drainage outfalls rehabilitated and newly constructed roadside drains provided in the Project ULBs that are identified as having high risks of flooding and/ or have drainage masterplans.</li> </ul> <p><b>Urban Transport:</b></p> <ul style="list-style-type: none"> <li>• Improved traffic flow within the Project ULBs and travel times between zones maintained at present levels or reduced in Project ULBs taking up urban roads and transport subprojects.</li> </ul> <p><b>Improved Institutional Capacity:</b></p> <ul style="list-style-type: none"> <li>• Project ULBs meet O&amp;M costs of all urban services and have sound financial management practices; and</li> <li>• Project ULBs and state-level bodies have</li> </ul> | <ul style="list-style-type: none"> <li>• State and local government statistics and reports;</li> <li>• Census data;</li> <li>• Sample surveys of BPL;</li> <li>• IPPMS and IPMU progress reports;</li> <li>• ADB review mission reports;</li> <li>• NGO reports; and</li> <li>• Baseline surveys.</li> </ul>  | <p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>▪ Overall capacity of the Project ULBs for urban governance and service delivery is improved to effectively operate and manage urban infrastructure and services.</li> <li>▪ Adequate funding is mobilized for operations, maintenance and replacement of newly provided facilities.</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>▪ ULBs do not have sufficient revenue to properly manage and maintain the existing and newly acquired assets.</li> <li>▪ Slow actions by Government of Rajasthan and the Project ULBs to undertake institutional and financial reforms.</li> <li>▪ Lack of sufficient skilled staff to operate and manage urban services in the Project ULBs.</li> <li>▪ Environmental regulations not fully enforced.</li> </ul> |

| Design Summary   | Performance Indicators/Targets   | Data Sources/Reporting Mechanisms   | Risks/ Assumptions  |
|--|--|---|---|
| urban services by, the Project ULBs by the end of the Project  | adequately trained and skilled human resources to operate and maintain the urban facilities and services.  |   |   |
| <p><b>Outputs</b><br/>Water supply subprojects successfully implemented</p> <p>Sewerage and sanitation subprojects successfully implemented</p> <p>Urban drainage subprojects successfully implemented</p> <p>Urban transport subprojects successfully implemented</p> <p>Capacity development subproject successfully implemented in all Project ULBs</p> | <p><b>Water Supply:</b></p> <ul style="list-style-type: none"> <li>• Existing system rehabilitation and UFW reduction program, including, replacement of leaking carrier mains, distribution mains and house connections, refurbishment/ replacement of pumping machinery, etc;</li> <li>• Installation/ replacement of consumer water meters in 100% of the water supply connections, and installation of flow meters at all supply points;</li> <li>• Provision of chlorination facilities to achieve 100% disinfection of supply;</li> <li>• Source augmentation in Bundi and Rajsamand; storage reservoirs (CWRs and OHSRs) and distribution networks in Bharatpur, Bundi, Dholpur, Karauli, Rajsamand, Sawai Madhopur, Churu, Barmer, Nagaur, and Sikar; water treatment plant in Dhaulpur and Rajasamand; and</li> <li>• Rehabilitation of existing and construction of new facilities to increase piped water supply coverage to 90% of the households.</li> </ul> <p><b>Sewerage and Sanitation:</b></p> <ul style="list-style-type: none"> <li>• Sewerage system - outfall, trunk sewers, tertiary networks and household connection in priority areas - completed and STPs constructed in Bundi (10 MLD), Barmer (10 MLD), Dhaulpur (10 MLD), Nagaur (10MLD), Sawai Madhopur (10MLD), Rajsamand (8 MLD), and Sikar (10 MLD).</li> </ul> <p><b>Urban Drainage:</b></p> <ul style="list-style-type: none"> <li>• Storm-water drains constructed in Baran, Bharatpur and Sikar.</li> </ul> <p><b>Urban Transport:</b></p> <ul style="list-style-type: none"> <li>• Construction of (i) a 2 lane road over bridge (RoB) at Baran, Churu, Sawai Madhopur and Barmer; (ii) 2 bridges over river Gambhiri and Bedach in Chittorgarh;</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Gaps and measures identified for strengthening the institutional structure of the ULBs and the state-level bodies;</li> <li>• Appropriate trainings provided to the Project ULB and state-level bodies' staff in operation and maintenance of services, financial management, etc.;</li> <li>• Hand-over of assets and responsibilities of sewerage systems to Project ULBs; and</li> <li>• Sustainable user charge structure implemented including solid waste management.</li> </ul> | <ul style="list-style-type: none"> <li>• IPMU quarterly progress reports;</li> <li>• Budgets and annual work plans;</li> <li>• Mid-term review reports for each loan</li> <li>• Mid-term review report for the Investment Program;</li> <li>• IPPMS reports;</li> <li>• ADB review mission reports;</li> <li>• Disbursement records;</li> <li>• Subproject completion and commissioning certificates; and</li> <li>• Financial statements of state-level agencies and ULBs</li> </ul> | <p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>▪ Public awareness campaigns are successful;</li> <li>▪ Adequate staff trained and placed for STP and other facilities' operation and maintenance;</li> <li>▪ Environmental regulations for acceptable practices implemented;</li> <li>▪ Resettlement and environmental compensation and clearance completed in a timely manner;</li> <li>▪ Adequate funds for provided for operation and maintenance; and</li> <li>▪ Tariff reforms and introduction of user charges implemented.</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>▪ Further deterioration of water supply systems may cause cost increases and scope changes;</li> <li>▪ Limited knowledge of existing distribution systems may result in investment in water supply rehabilitation not achieving the projected improvements;</li> <li>▪ Households not willing to pay for the services; and</li> <li>▪ Slow actions by Government of Rajasthan and the Project ULBs to undertake institutional and financial reforms.</li> </ul> |

| Design Summary                    | Performance Indicators/Targets   | Data Sources/Reporting Mechanisms | Risks/ Assumptions         |                               |
|-----------------------------------|--|-----------------------------------|----------------------------|-------------------------------|
| <b>Activities with milestones</b> |  |                                   | <b>Inputs</b>              | <b>(\$ Million)</b>           |
| 1.                                | <i>Project Preparation</i><br>Detailed engineering design and bid documents completed for works by November 2008<br>Land acquisition & environmental clearances for works completed by January 2009.   |                                   | ADB<br>GoR<br><b>Total</b> | 150.0<br>69.0<br><b>219.0</b> |
| 2.                                | <i>Subproject Implementation</i><br>2.1 All works contracts awarded by September 2009;<br>2.2 New water supply rising main, overhead and ground storage reservoirs, new pump houses, chlorination plants, bulk meters installation completed in Bharatpur by 2011;<br>2.3 Rehabilitation and de-silting of existing drains, and construction of associated structures in Bharatpur completed by 2012;<br>2.4 WTP, new water supply rising main, distribution main, replacement of leaking pipes, construction and rehabilitation of pump houses, overhead storage reservoirs, chlorination plants, and bulk meter installation completed in Dhaulpur by 2011;<br>2.5 STP and associated outfalls, trunk mains, laterals and household connections in Dhaulpur completed by 2012;<br>2.6 New water supply rising main, overhead and ground storage reservoirs, chlorination plants, bulk meter installation completed in Karauli by 2011;<br>2.7 New water supply rising main, overhead and ground storage reservoirs, new and rehabilitated pump houses, chlorination plants, and bulk meter installation completed in Sawai Madhopur by 2012;<br>2.8 RoB in Sawai Madhopur completed by 2011;<br>2.9 New water supply rising main, overhead and ground reservoirs, new and rehabilitated pump houses, chlorination plants, bulk meter installation completed in Nagaur by 2011;<br>2.10 STP and associated outfalls, trunk mains, laterals and household connections completed in Nagaur by 2012;<br>2.11 New water supply rising main, overhead and ground reservoirs, new and rehabilitated pump houses, chlorination plants, and bulk meters completed in Barmer by 2012;<br>2.12 STP and associated outfalls, trunk mains, laterals and household connections in Barmer completed by 2012;<br>2.13 RoB in Barmer completed by 2012;<br>2.14 New water supply distribution network, rehabilitation of pump houses, chlorination plants, and bulk meters completed in Sikar by 2012;<br>2.15 STP and associated infrastructure, as in other towns, in Sikar completed by 2012;<br>2.16 Rehabilitation and de-silting of existing drains, and construction of associated road culverts, completed by 2012;<br>2.17 New water supply rising main, overhead and ground reservoirs, new and rehabilitated pump houses, chlorination plants, and bulk meters completed in Churu by 2012;<br>2.18 RoB in Churu completed by 2012;<br>2.19 New water supply rising main including new tubewells, distribution networks, overhead and ground reservoirs, new and rehabilitated pump houses, chlorination plants, bulk meters completed in Bundi by 2012;<br>2.20 STP and associated infrastructure, as in other towns, in Bundi completed by 2012;<br>2.21 RoB in Baran completed by 2012;<br>2.22 Rehabilitation and de-silting of existing drain, and construction of associated road culverts, in Baran completed by 2012;<br>2.23 Two bridges on rivers in Chittorgarh completed by 2012; and<br>2.24 WTP, new water supply rising main, distribution mains, replacement of leaking pipes, new and rehabilitated pumphouses, overhead and ground reservoirs, chlorination plants, and bulk meters completed in Rajsamand by 2012. |                                   |                            |                               |
| 3.                                | <i>Institutional Capacity Development and Implementation Support</i><br>3.1 Capacity Development Plan, identifying the gaps, recommended institutional structure and training needs completed by December 2008; and<br>3.2 Training of ULB and government department officials initiated by January 2009.  |                                   |                            |                               |

ADB = Asian Development Bank, BPL = below poverty line, CAPP = Community Action Participation Program, CWR = clear water reservoirs, DSC = Design and Supervision Consultants, GoR = Government of Rajasthan, IEC = Information, Education and Communication, IPMC = Investment Program Management Consultants, IPMU = Investment Program Management Unit, IPIU = Investment Program Implementation Unit, IPPMS = Investment Program Performance Management System, MLD = million liters per day, NGO = non-government organization, OHSR = overhead storage reservoirs, STP = sewerage treatment plant, UFW = un-accounted for water, ULB = urban local body, WSS = water supply and sanitation, WTP = water treatment plant.