



Draft Design and Monitoring Framework

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People's Republic of China: Shanxi Small Cities and Towns Development Demonstration Sector Project

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 Targets/ Indicators ¹	Data Sources/ Reporting Mechanisms	Assumptions and Risks
<p>Impact Improved environmental quality and increased employment generation in small cities and towns in Shanxi Province</p>	<p>By 2018 (baseline year 2007), in small cities and towns in Shanxi Province</p> <p>Average days of air quality above Grade II in county-level cities increased to 240 per year</p> <p>Surface water quality in the middle and lower reaches of the Fen River increased from Class V to Class IV²</p> <p>Unemployment reduced to and maintained at no more than 4.5%</p> <p>Per capita annual disposable income of urban households increased by 6%</p>	<p>Provincial Statistics Bureau Reports</p> <p>Provincial Environmental Protection Bureau</p> <p>Provincial Labor Affairs Bureau</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • 11th FYP and small city and town Master Plans effectively implemented • Strong provincial economic development trends continue after the 11th FYP • Applicable environmental laws are effectively enforced <p>Risks</p> <ul style="list-style-type: none"> • IAs do not use suitable external monitoring agencies; performance data are not collected • Urban development pressures outpace planned infrastructure development
<p>Outcome Improved urban infrastructure and municipal services in about seven small cities and towns in Shanxi Province</p>	<p>By 2015 (baseline year 2007), in the subproject cities and towns (specific indicators provided for 3 core subproject cities/towns—Pingyao, Wutong and Youyu)</p> <p>All components Public satisfaction with environmental conditions increased:³ - At least 75% of population satisfied with environmental conditions⁴</p> <p>District heating components Percentage of urban population with access to centralized heating increased:</p>	<p>Provincial Statistics Bureau</p> <p>Provincial Environmental Protection Bureau</p> <p>Provincial Construction Bureau</p> <p>County-level Labor Bureau</p> <p>County Poverty Relief Office</p> <p>County Water Affairs Bureau</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • Project financing is provided on time • Relevant authorities offer strong support to the city and town PMOs and IAs on capacity development for project implementation and operation • Effective stakeholder participation and ownership is developed • Different specialist

¹ The target of impact should be 3–5 years after project completion.

² The PRC classifies surface water quality into 5 categories. Class V is polluted and Class IV as water for industrial water supply and recreational waters in which there is not direct human contact with the water.

³ Public satisfaction in base year 2008 from PPTA survey. Percent improvement will come from PMOs.

⁴ TBD during subproject appraisal and monitored as part of PPMS.

⁵ Number of students per class and number of classes per year may be revised upon completion of the training curriculum.

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	<p>- Wutong from 0% to 25% - Youyu from 33% to 47% - Others cities/towns: TBD</p> <p>River improvement components Percentage of improved river course (length) or lake perimeter in urbanized areas increased: - At least 80% of river course or lake perimeter in urbanized area improved</p> <p>Road components Length of urban roads improved or upgraded increased: - Wutong by 1.8 km - Youyu by 10.16 km - Others cities/towns: TBD</p> <p>Education components Number of people receiving municipally provided vocational training increased: - Wutong to 500 per class and 10 classes per year⁵ - Others: TBD</p> <p>Water supply components Percent change in urban population with access to piped water increased: - Youyu by 28% - Others: TBD</p> <p>Wastewater management components Percentage of urban population served by wastewater collection system (sewer network) and drainage network increased: - At least 75% of urban population is served by wastewater collection system (sewer network) - At least 50% of the urbanized area is served by the storm water drainage system</p>	<p>Annual environmental statistics</p> <p>Municipal records/statistics</p> <p>Statistical records/data of small cities and towns</p> <p>District heating companies</p>	<p>disciplines are well coordinated</p> <ul style="list-style-type: none"> Land acquisition and resettlement policies are effectively implemented; there is acceptance and cooperation from the stakeholders on the implementation process Project design and construction are implemented effectively <p>Risks</p> <ul style="list-style-type: none"> Local geological conditions affect construction activities Exceptional weather affects the annual effective construction period Costs are much higher than anticipated Major amendments and changes to the master plans in the subproject cities and towns
<p>Outputs Subproject 1: Pingyao County Component 1: Huiji River Improvement River bed is dredged and embankments are constructed</p>	<p>By 2015</p> <p>7.2 km of Huiji river rehabilitated</p>	<p>From All: Regular IA reports on contract expenditure and works progress</p> <p>Monitoring of project implementation and progress by ADB Review Missions</p>	<p>Assumptions</p> <ul style="list-style-type: none"> Project financing is provided on time Relevant authorities offer strong support to the city and town PMOs and IAs on capacity development for project

⁶ Xiaoyi City agencies will operate and maintain heating, gas, roads, and wastewater infrastructure in Wutong.

Design Summary	Performance Targets/ Indicators ¹	Data Sources/ Reporting Mechanisms	Assumptions and Risks
<p>Water storage reservoirs are built; rubber dams are installed</p> <p>Subproject 2: Wutong Town Component 1: Caoxi Road and Associated Municipal Services Road is widened and reconstructed; drainage channel is improved</p> <p>Component 2: Heat Supply New heat exchange stations and distribution network operational</p> <p>Component 3: Gas Supply New gas supply storage and distribution system operational</p> <p>Component 4: Wastewater Treatment WWTP and collection network operational</p> <p>Component 5: Education Services Facilities New schools and vocational training center in use</p> <p>Subproject 3: Youyu County Component 1: Heat Supply New heat stations, heat exchange stations, and distribution network operational</p> <p>Component 2: Water Supply Drinking water production and distribution works operational</p> <p>Component 3: Drainage and Wastewater Collection Combined storm water drainage and sewerage network operational</p>	<p>3 rubber dams constructed</p> <p>By 2015</p> <p>1.8 km of arterial road constructed, street lighting and traffic lights installed, drainage channel adjacent to Caoxi Road reconstructed.</p> <p>58MW secondary heat sub-station and district heating pipeline constructed</p> <p>Gas supply system (5.9 million m³/year) for residential area constructed</p> <p>A new 4,000 m³/day WWTP and 12.3 km of wastewater collection network constructed.</p> <p>One vocational school, one junior high school and 2 nursery schools constructed.</p> <p>By 2015</p> <p>New boiler station (116MW), district heating substations and distribution network constructed.</p> <p>Two new wells (total 1,920 m³/day) and new water distribution network constructed.</p> <p>Combined storm water drainage and sewerage network rehabilitated</p>	<p>Works supervision, construction, completion and acceptance records</p> <p>Information from final accounts of works</p> <p>Monitoring reports on institutional development including number of staff trained, areas of training, and strengthened organizations and procedures</p> <p>Xiaoyi City⁶ Public Affairs Management Bureau [all components]</p> <p>Xiaoyi City Transportation Bureau and Water Affairs Bureau</p> <p>Xiaoyi City District Heating Company</p> <p>Xiaoyi Gas Supply Company</p> <p>Xiaoyi Wastewater Company</p> <p>Xiaoyi City Education Department and Wutong Town Government</p> <p>Youyu Development and Reform Commission</p> <p>Youyu Construction Bureau</p> <p>County records and documents</p>	<p>implementation and operation</p> <ul style="list-style-type: none"> • Effective stakeholder participation and ownership is developed • Different specialist disciplines are well coordinated • Land acquisition and resettlement policies are effectively implemented; there is acceptance and cooperation from the stakeholders on the implementation process • Project design and construction are implemented effectively <p>Risks</p> <ul style="list-style-type: none"> • Local geological conditions affect construction activities • Exceptional weather affects the annual effective construction period • Costs are much higher than foreseen • Unforeseen land acquisition and resettlement issues, which could constrain the efficient implementation of the project works and restoration of livelihoods of the affected people

Design Summary	Performance Targets/ Indicators ¹	Data Sources/ Reporting Mechanisms	Assumptions and Risks
<p>Component 4: Roads and Associated Municipal Services New roads in the new town operational</p> <p>Component 5: Flood Control Flood control channel is operational</p> <p>Subsequent subproject cities and/or towns Urban infrastructure and services improved and operational</p> <p>For all subprojects: Infrastructure and service providers have increased capacity to plan, construct, operate and maintain facilities</p>	<p>10.1 km of secondary and tertiary roads constructed; street lighting, electrical power and tele-communications lines installed</p> <p>4.85 km of river course rehabilitated and landscaped</p> <p>By 2015</p> <p>TBD</p> <p>By 2015 Shanxi PMO and the subproject city and town PMOs and IAs:</p> <p>Refine PPMS established in 2009</p> <p>Prepared and implemented a 5-year (2009–2014) training plan for project management, O&M, financial management and institutional capacity building</p> <p>Improved organization structure and financial management systems</p>		
Activities		Inputs	
<p>Subproject 1: Pingyao County</p> <p>1.1 Huiji River Improvement Activity (1) Design the facilities, acquire land, and tender the works by 2009. Activity (2) Rehabilitate 7.2 km of Huiji River by 2011. Activity (3) Construct 3 rubber dams by 2011.</p> <p>Subproject 2: Wutong Town</p> <p>2.1 Caoxi Road and Associated Municipal Services Activity (4) Design the facilities, acquire land, and tender the works by 2009 Activity (5) Reconstruct 1.8 km of arterial road by 2011. Activity (6) Install street lighting and traffic lights by 2011. Activity (7) Reconstruct drainage channel adjacent to road by 2011.</p> <p>2.2 Heat Supply Activity (8) Design the facilities, acquire land, and tender the works by 2009. Activity (9) Construct new secondary heat sub-station (58 MW) by 2012. Activity (10) Construct district heating pipeline network by 2012.</p> <p>2.3 Gas Supply Activity (11) Design the facilities, acquire land, and tender the works by 2009. Activity (12) Construct new gas supply system for residential area (5.9 million m³/year) by 2012.</p> <p>2.4 Wastewater Treatment Activity (13) Design the facilities, acquire land, and tender the works by 2009. Activity (14) Construct new wastewater treatment plant with capacity 4,000 m³/day by 2012. Activity (15) Construct 12.3 km of new wastewater collection network.</p>		<p>ADB Provide \$100 million loan with timely disbursement based on the construction schedule of the works:</p> <ul style="list-style-type: none"> • Civil: \$73.9. million • Capital goods: \$11.6 million • Consulting services: \$2.5 million • Financing charges during implementation: \$12 million <p>WFPF Grant \$0.25 million</p> <p>Government and IA Provide about \$165.8 million equivalent (CNY1,115 million) in counterpart funds with timely disbursement based on the construction schedule</p>	

Activities	Inputs
<p>2.5 Education Services Activity (16) Design the facilities, acquire land, and tender the works by 2009. Activity (17) Construct two nursery schools by 2011. Activity (18) Construct one junior high school by 2013. Activity (19) Construct one vocational school by 2013.</p>	of the works
<p>Subproject 3: Youyu County 3.1 Heat Supply Activity (20) Design the facilities, acquire land, and tender the works by 2009. Activity (21) Construct new heat-only boiler station (116 MW) by 2014. Activity (22) Construct district heating sub-stations and distribution network by 2014. 3.2 Water Supply Activity (23) Design the facilities, acquire land, and tender the works by 2009. Activity (24) Construct two new wells with production 1,920 m³/day by 2014. Activity (25) Construct new water distribution network in urban expansion area by 2014. 3.3 Drainage and Wastewater Collection Activity (26) Design the facilities, acquire land, and tender the works by 2009. Activity (27) Rehabilitate the combined storm water drainage and wastewater collection network by 2014. 3.4 Roads and Associated Municipal Services Activity (28) Design the facilities, acquire land, and tender the works by 2009. Activity (29) Construct 10.1 km of secondary and tertiary streets in new expansion area by 2014. Activity (30) Install on new streets street lighting, electrical power, and telecommunications works by 2014. Activity (31) Carry out landscaping by 2014. 3.5 Flood Control Activity (32) Design the facilities, acquire land, and tender the works by 2010. Activity (33) Reconstruct 4.85 km of river course in urbanized area by 2012. Activity (34) Carry out landscaping by 2012.</p> <p>Institutional Capacity Building for Project Management Activity (35) Strengthen financial management and corporate governance in water and wastewater agencies/companies in any subproject city or town with a water supply or wastewater component by 2015. Activity (36) Complete organizational arrangements for Shanxi PMO to be able to implement the Project by 2009. Activity (37) Complete necessary organizational arrangements for IAs (hiring staff; setting up accounting systems; and improving financial, administrative, and human resource policies and procedures) by 2009. Activity (38) Develop plans, budgets, and procedures for loan implementation and project control in Shanxi PMO by 2010. Activity (39) Complete Shanxi PMO and IA staff training (training on ADB procedures, procurement, traffic management, road maintenance, water supply, pollution control, environmental monitoring, and financial management) by 2015. Activity (40) Shanxi PMO and IAs refine the PPMS and establish targets and procedures no later than 6 months after loan effectiveness.</p>	

ADB=Asian Development Bank, FYP=Five-Year Plan, IA=implementing agency, km=kilometer, km²=square kilometer, m=meter, m²=square meter, m³=cubic meter, MW=megawatt, PMO=project management office, pcu/hr=passenger car unit/hour, PPMS=project performance management system, O&M=operation and maintenance, TBD=to be determined, WFPF=Water Financing Partnership Facility, WWTP=wastewater treatment plant.