

RISK ASSESSMENT AND RISK MANAGEMENT PLAN

| Risk Description | Rating | Mitigation Measures | Responsibility |
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| Financial Management and Financial Suitability | | | |
| 1. Unfamiliar with ADB’s financial management requirements and/or disbursement procedures | M | The project will provide consulting services and training on disbursement and financial management including accounting, reporting, and auditing during project implementation. | ZCG, PMO, and Zuoquan County Finance Bureau |
| 2. Counterpart fund shortage for project implementation | M | Close monitoring will be carried out during project implementation. ZCG will prioritize the project in its budget process and ensure the timely provision of funds. A covenant is included in the project agreement requiring Shanxi Provincial Government to cover any shortfalls. | ZCG and ADB |
| Procurement and Implementation | | | |
| 3. Unfamiliar with ADB procurement procedures | L | ZCG will recruit an experienced and qualified procurement agent through competitive bidding to assist with procurement planning and management. | ZCG, PMO, and the implementing agencies |
| 4. Delays in project implementation caused by limited experience | M | The project will provide implementation consulting support; and conduct training on procurement and contract administration, disbursement, safeguards, and project management. | PMO and the implementing agencies |
| Corruption | | | |
| 5. Corrupt practices may affect project design, procurement, and implementation. | L | The project will assist ZCG, the implementing agencies, and the PMO to ensure good governance, accountability, and transparency in project operations. ADB will review ZCG’s and the implementing agencies’ performance during review missions. Assurances for governance and anticorruption are included in the project agreement. | ZCG, PMO, and the implementing agencies |
| Operation and Maintenance | | | |
| 6. Unsustainable operation and maintenance of infrastructure components may occur because of lack of capacity or budget. | M | ZCG will ensure adequate staff resources and annual operation and maintenance budget in accordance with loan covenants; and the project will provide (i) support for management improvement for water supply, wastewater system monitoring and management, and maintenance of river courses and | ZCG, PMO, and the implementing agencies |

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| | | wetlands; and (ii) institutional support for prudent operational practices and training. | |
| Environmental Protection | | | |
| 7. The construction and management of the components is undertaken without regard to the impact mitigation and management measures recommended to achieve integrated environmental management and land use planning. | M | A covenant is included in the project agreement for ZCG and the implementing agencies to implement the project in strict conformity with all laws and regulations of the Government of the People's Republic of China on environmental protection, health, labor, and occupational safety; ADB's Safeguard Policy Statement (2009); and the environmental management plan. The project will help strengthen and empower the local government and relevant agencies to carry out environmental monitoring and protection in a coordinated and holistic manner. | ZCG, PMO, and the implementing agencies |
| Land Acquisition and Resettlement | | | |
| 8. Project implementation may be affected by delays in land acquisition and resettlement. | M | ZCG will make available and release in a timely manner funds for compensation under its fiscal budget in accordance with the resettlement plan. A full-time resettlement staff member will be assigned to the PMO for smooth implementation of land acquisition and resettlement. The PMO will conduct internal monitoring of resettlement plan implementation and report to ADB through quarterly project progress reports. The project will support (i) initial project implementation by engaging a resettlement expert to assist in detailed measurement surveys and resettlement plan finalization, and (ii) independent resettlement monitoring to ensure compliance. | ZCG, PMO, and the implementing agencies |
| Water and Wastewater Management | | | |
| 9. Lack of experience in reducing physical and economic water losses and demand management to conserve water | M | Capacity building and training will be provided under the project to make effective use of surface and ground water, reduce losses, and manage demand in Zuoquan County. Consulting services will be provided for integrated urban and rural water management. | ZCG |
| 10. Buildings and communities do not connect to the new sanitary | M | Pipes connecting the buildings to the sanitary sewers will be installed by | ZCG |

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| sewers installed under the project. | | the property owners or developers in accordance with a regulation issued by the Ministry of Housing and Urban–Rural Development. | |
| 11. The river channel, wetland, and associated amenity and low-impact development facilities improved under the project may deteriorate because of improper management and maintenance, i.e., garbage dumping into the river channel. | M | The maintenance authorities are required to coordinate with each other and prepare a river system maintenance program and carry out regular inspections and maintenance of the river channel, wetland, and associated amenity and low-impact development facilities. ZCG will take the lead to ensure coordination among the maintenance authorities. | ZCG |
| Others | | | |
| 12. Urban growth exceeds forecasts and exerts more pressure on available urban infrastructure | L | ZCG is being implementing its urban development master plan and can manage the urban growth rate and/or increase investment to meet the required demand. | ZCG |
| 13. Sponge city action plan not applied in Zuoquan County's new city development ^a | L | During project preparation, ZCG has shown their enthusiasm to apply sponge city development concept in their new city development. The project team will closely work together to prepare an implementable action plan for ZCG. | ZCG |
| 14. Climate-induced changes in temperature and river flows result in less favorable conditions for vegetation growth and/or riparian and aquatic ecosystems | M | During the project preparation, a climate risk vulnerability assessment was conducted. The overall design is geared toward climate resilience. Each project component incorporates adaptation measures, including raising embankment heights and increasing reservoir storage capacity to cope with climate-induced flooding; adopting a mix of climate-resilient native species for the revegetation and forest planting components; and capacity building on water resources management that is mindful of projected climate risks. | ZCG |
| 15. Improper land use management and enforcement upstream result in continued siltation and pollution | L | ZCG is implementing government's funded soil conservation plan which includes land use management. | ZCG |

ADB = Asian Development Bank, PMO = project management office, ZCG = Zuoquan County Government.

Note: Risk ratings as follows: H = high, S = substantial, M = moderate, L = low.

^a The sponge city initiative is the government's policy to promote water conservation. A key principle is to minimize the impact of urban development on the natural water cycle through green infrastructure such as preserved floodplains, storm water wetlands, retention ponds, sunken parks, bio-retention swales, seepage wells, and green roofs.

Source: Asian Development Bank.