

PROJECT PREPARATORY TECHNICAL ASSISTANCE

A. Justification

1. During the country programming mission held in Manila in October 2013, the Government of the People's Republic of China (PRC) requested the Asian Development Bank (ADB) to assist the Zuoquan County Government of Shanxi Province to prepare the Shanxi Urban-Rural Water Source Protection and Environmental Demonstration Project which is included in the lending program for 2016 under the PRC: Country Operations Business Plan, 2014–2016. A project preparatory technical assistance (TA) will help ensure compliance with ADB's requirements and incorporation of international best practices in the project design.

B. Major Outputs and Activities

2. A TA of \$850,000 will help prepare a sound and viable project design compliant with ADB requirements. The TA will address the following aspects related to the project: (i) assess the technical feasibility of the project; (ii) conduct due diligence on the economic and financial feasibility of the project; (iii) review the safeguard requirements; (iv) conduct social surveys and consultations; (v) develop the capacity of the Zuoquan county government for project management; and (vi) prepare project documents, including the ADB's draft report and recommendation of the President (RRP) and its key linked documents (e.g. sector assessment, economic and financial analyses, project administration manual, safeguard documents, etc.).

3. The major outputs and activities are summarized in Table A3.1.

Table A3.1: Summary of Major Outputs and Activities

Major Activities	Expected Completion Date	Major Outputs	Expected Completion Date
Consultant mobilization	IV May 2015		
Sector assessment and stakeholder analysis	IV June 2015	An inception report	IV June 2015
Project technical, economic, financial, environment and social appraisal	Interim results by III Oct 2015	An interim report including interim results on IEE, RPs, participatory strategy, social and poverty analysis, economic and financial analysis, a financial management assessment report, DMF, and PPMS	III Oct 2015
Social economic survey and consultations, environmental and social safeguards, gender and development, and poverty assessment	Draft final results by Feb 2016	A draft final report with all appendices including an IEE report, RPs, social and gender action plan, participation plan/communication strategy, an economic and financial analysis report, a financial management assessment report, PPMS, and draft RRP including PAM	IV Feb 2016
Institutional capacity and training needs		An institutional capacity and training needs assessment report	IV Feb 2016
Procurement capacity		A procurement plan and	IV Feb 2016

Major Activities	Expected Completion Date	Major Outputs	Expected Completion Date
assessment		procurement capacity assessment report, project procurement risk assessment, master bidding documents, and training events in procurement and consulting services procedures under ADB financed operations	

ADB = Asian Development Bank, DMF = design and monitoring framework, IEE = Initial Environmental Examination, PAM = project administration manual, PPMS = project performance management system, PPTA = project preparatory technical assistance, RPs = resettlement plans, RRP = report and recommendation of the President.

Source: Asian Development Bank

C. Cost Estimate and Proposed Financing Arrangement

4. The TA is estimated to cost \$1,000,000 equivalent, of which ADB will finance \$850,000 on a grant basis from ADB's Technical Assistance Special Fund (TASF-other sources). The Zuoquan county government will provide counterpart support in the form of counterpart staff remuneration and transport, logistics support in arranging workshops and field visits, fully functional office space for consultants with water and utility supply, a telephone line and access to internet, and other in-kind contributions. The detailed cost estimate is presented in Table A3.2.

Table A3.2: Cost Estimates and Financing Plan (\$'000)

Item	Total Cost
Asian Development Bank^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants (13.5 person-months)	325.0
ii. National consultants (45.5 person-months)	260.0
b. International and local travel	65.0
c. Reports and communications	20.0
2. Equipment ^b	25.0
3. Workshops, training, seminars, and conferences ^c	
a. Workshops	25.0
b. Training program	20.0
4. Surveys	35.0
5. Miscellaneous administration and support costs ^d	15.0
6. Contract negotiations	6.0
6. Contingencies	54.0
Total	850.0

^a Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-other sources)

^b Equipment will be handed over to the executing agency upon TA completion.

Type	Quantity	Cost
Office computers with wireless broadband internet access	5	\$ 15,000
Printer (1), photocopy machine (1), digital camera (1), and other items (scanner, etc.)		\$ 10,000

^c Workshops, training, seminars, and conferences

Purpose	Venue
Stakeholder and resettlement consultation workshops	Zuoquan County, Shanxi
Inception, interim, and final workshops	Zuoquan County, Shanxi
Training on social and environmental safeguards, procurement and financial management	Zuoquan County, Shanxi

^d Includes document translation and printing

Source: Asian Development Bank estimates.

D. Consulting Services

5. An international consulting firm will be engaged following ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). A total of 13.5 person-months (pm) of international and 45.5 pm of national consulting services will be required. The consulting firm will be selected by (i) inviting simplified technical proposals and (ii) using the quality- and cost-based selection method, with a quality–cost ratio of 90:10. To reduce administrative burden and improve economy and efficiency and value for money, all consulting services under the TA would be engaged on output-based (lump-sum) contracts. The terms of reference for the PPTA consultants are described below. The TA team, among other tasks, needs to adequately address the following aspects relating to the ensuing loan project: (i) detailed loan executing agency /implementing agency capacity assessment, and suggested remedial action plan to build executing agency and implementing agency capacity to minimize procurement and financial management risks; (ii) proposed or indicative loan related procurement plan with suggested level of priority or, if applicable, post review based on executing agency and implementing agency capacity assessment; and (iii) indicative implementation schedule with proposed sequencing of consultant recruitment and procurement bidding and awarding. Table A3.3 provides details of the required expertise.

Table A3.3: Summary of Consulting Services Requirement

International Positions	Pm	National Positions	Pm
Environment and water resources management specialist (team leader)	7.0	Flood risk management specialist (deputy team leader)	6.0
Environment specialist	2.0	Environment specialist	4.0
Economic and financial specialist	2.5	Municipal engineer	5.0
Land use planning specialist	1.0	Transport specialist	5.0
Environmental and resource economist	1.0	Ecological specialist	3.0
		Resettlement specialist	4.0
		Financial specialist	4.0
		Social development specialist	3.0
		Procurement specialist	1.5
		Institutional specialist	1.0
		Eco-compensation specialist	3.0
		Land use planning specialist	3.0
		Climate change specialist	1.0
		Dam safety specialist	2.0
Total	13.5	Total	45.5

Source: Asian Development Bank estimates.

6. The outline terms of reference for the project preparatory TA consultants are described below.

7. **Environment and water resources management specialist and team leader** (international, 7 pm). The specialist will have a master's degree or equivalent qualification in water resources management and at least 7 years of experience in formulating donor funding investment projects in water resources management. The specialist will have overall responsibility for effective and timely implementation of the PPTA and quality of all outputs, and coordinating and consolidating inputs of government agencies and other specialists.

8. **Environment specialists** (international, 2 pm; national, 4 pm). The international specialist will have a master's degree or equivalent qualification in environmental studies and at least 8 years of experience in environmental assessment. The national specialist will have a bachelor's degree or equivalent qualification in environmental studies and at least 5 years of experience in conducting environmental assessment. The international and national specialists will work in close cooperation and (i) assess possible environmental impacts of each project activity, including downstream impacts, among other issues; and (ii) prepare an initial

environmental examination which complies with ADB's Safeguard Policy Statement (2009) requirements.

9. **Economic and financial specialist** (international, 2.5 pm). The specialist will have a master's degree in economics or equivalent qualification, and at least 8 years of work experience in economic and financial analyses of ADB or other projects financed by multilateral development banks related to environment and natural resources management. The specialist will (i) prepare the economic analysis of the project in accordance with ADB's Guidelines for the Economic Analysis of Project; (ii) provide guidance to the national financial specialist; (iii) finalize the financial analysis and financial management assessment, cost estimates and financing plan; and (iv) review tariff structure and affordability.

10. **Land use planning specialist** (international, 1 pm; national, 3 pm). The specialists will have a master's degree in urban planning or environmental planning, and at least 5 years of work experience in urban planning or environmental planning. The specialists will be responsible for (i) reviewing existing township master plans, environmental and flood management plans, and economic and social development plans for the county and identifying gaps and needs for coordination, and (ii) developing a roadmap and identifying key elements for developing an integrated urban-rural land use plan for water resources management and ecosystem protection.

11. **Environmental and resource economist** (international, 1 pm). The specialist will have a master's degree in environmental and resource economics or related field, and 5 years of experience in water demand management and pricing. The specialist will (i) review the current water demand management of Zuoquan County and relevant national and provincial regulations on water demand management and pricing, (ii) identify key elements for a water demand manage plan of the county, and (iii) recommend reform measures in water pricing and potential for water rights market development.

12. **Flood risk management specialist and deputy team leader** (national, 6 pm). The specialist and deputy team leader will have a university degree or equivalent qualification in flood risk management and reservoirs and at least 5 years of work experience in formulating foreign funded projects. The specialist will support the international team leader to ensure the effective and timely implementation of the PPTA and will be responsible for the coordination and review of the design and quality control for flood risk management and reservoir safety-related aspects of the project.

13. **Municipal Engineer** (national, 5 pm). The specialist will have a university degree in civil engineering and over 5 years of experience in designing civil engineering projects related to wastewater and water supply networks. The specialist will specifically be responsible for the design and quality control of all investments that involves water, wastewater, and other municipal pipeline networks.

14. **Transport specialist** (national, 5 pm). The specialist will have a university degree in civil engineering and over 5 years of experience in designing road projects. The specialist will specifically be responsible for the design and quality control of all investments that involves road construction and improvement.

15. **Ecological specialist** (national, 3 pm). The specialist will have a university degree in ecology or related field and over 5 years of experience in re-vegetation projects. The specialist will specifically be responsible for the design and quality control of all investments that involves

re-vegetation to protect water resources and prevent soil erosion, taking into account potential climate change impacts.

16. **Resettlement specialist** (national, 4 pm). The specialist will have a master's degree or relevant qualification in social sciences and/or development studies and at least 5 years of work experience in resettlement planning. The specialist will (i) conduct surveys and consultation, and review involuntary resettlement aspects of the project; (ii) confirm social safeguards categorizations; (iii) assist the implementing agencies to prepare resettlement plans; and (iv) provide training to the executing and implementing agencies on resettlement and land acquisition.

17. **Financial specialist** (national, 4 pm). The specialist will have (i) a university degree in accounting, finance, or financial management; (ii) a recognized professional accountancy qualification (e.g., CPA); and (iii) at least 5 years of experience in project financial management assessment. The specialist will (i) conduct financial analysis including fiscal impact analysis and financial variability analysis; (ii) review tariff structure and affordability; (iii) prepare project costs in cooperation with team leader and deputy team leader, (iv) conduct a financial management assessment of the executing and implementing agencies, funds flow and disbursement mechanisms, and identify any further capacity development (financial management and ADB's disbursement procedures) that will be necessary for the project; and (v) assess, as part of the financial management assessment, the executing and implementing agencies, and project leading group's capability to manage imprest account and Statement of Expenditures (SOE) procedures without ceilings.

18. **Social development specialist** (national, 3 pm). The specialist will have a master's degree or relevant qualification in social sciences and/or development studies and at least 5 years of work experience in social and livelihood development, particularly forestry related programs. The specialist will (i) conduct surveys and consultations, and poverty, social, and gender analysis; (ii) prepare, social action plan/participation plan/communication strategy, including a gender action plan; and (iii) provide training to the executing and implementing agencies.

19. **Procurement specialist** (national, 1.5 pm). The specialist will have a university degree in engineering and at least 5 years of experience in project management, procurement, and consulting services. The specialist will (i) conduct procurement capacity assessment for the executing and implementing agencies to undertake procurement and consultant recruitments envisaged under the project, (ii) prepare a procurement plan and first sets of bidding documents, (iii) provide training for the executing and implementing agencies on ADB's procurement procedures, (iv) support the executing and implementing agencies with project management tasks, (v) provide training on the management and implementation of ADB funding projects, and (vi) support the executing and implementing agencies in project design.

20. **Institutional specialist** (national, 1 pm). The specialist will preferably have a master's degree in water resources management or relevant field, and at least 10 years of work experience in water management policies. The specialist will (i) support the executing and implementing agencies with reviewing technical and institutional aspects of the proposed project, and (ii) provide training on technical and institutional issues, as needed.

21. **Eco-compensation specialist** (national, 3 pm). The specialist will have a master's degree in environmental or resources economics or equivalent and at least 5 years of work experience in developing and implementing eco-compensation programs. The specialist will be responsible for (i) reviewing international and national case studies in payment for ecosystem

services and eco-compensation with relevance to Zuoquan County, (ii) designing scheme for livelihood improvement combined with sustainable forestry, and (iii) recommending necessary policy framework to help implement eco-compensation policy measures across jurisdictions.

22. **Climate change specialist** (national, 1 pm). The specialist will have a university degree in atmospheric science, environmental studies or related field, and at least 5 years of experience in assessing potential climate change impacts and adaptation measures are desirable. The specialist will (i) assess potential climate change impacts on Zuoquan County, (ii) assess adequacy of infrastructure under the project under projected climate impacts, and (iii) recommend adaptation measures to improve climate resilience.

23. **Dam safety specialist** (national, 2 pm). The specialist will have (i) master's degree in civil engineering including dam design and management; (ii) at least 10 years demonstrated project experience in the design and management of dams, including rehabilitation and safety; (iii) knowledge of all relevant PRC laws, regulations, and policies concerning dam construction, management, and safety; (iv) knowledge of current best-practice engineering and safety standards for dams, especially small- and medium-sized dams; (v) demonstrated track record to lead the design and review of dam safety issues, including arrangement and/or facilitation of expert safety panels; and (vi) ideally, proficiency in spoken and written English. The specialist will be responsible for all dam-related management and safety issues in the project.

E. Implementation Arrangements

24. The Zuoquan county government will be the executing agency and responsible for the overall planning and implementation of the TA. A project leading group (PLG) and a project management office have been established. The PLG is headed by the mayor of Zuoquan County and includes representatives from relevant government department¹ of Zuoquan county government. The implementing agencies will include Shixia Reservoir Management Department, Zuoquan County Transportation Bureau, and Zuoquan County Housing Construction Bureau. Disbursements under the TA will be done in accordance with ADB's *Technical Assistance Disbursement Handbook* (May 2010, as amended from time to time). Procurement of equipment will be conducted by the consulting firm to be engaged in line with ADB's Procurement Guidelines (2013 as amended from time to time) and such equipment will be turned over to the executing agency upon completion of TA activities.

25. The TA will be implemented over 11 months tentatively from 1 May 2015 to 31 March 2016. The proposed TA processing and implementation schedule is listed in Table A3.4.

Table A3.4: Technical Assistance Processing and Implementation Schedule

Major Milestones	Expected Completion Date
Approval of concept paper	Dec 2014
Consultant mobilization	May 2015
Inception mission	Jun 2015
Midterm review mission	Oct 2015
Final review mission	Feb 2016

Source: Asian Development Bank estimates.

¹ Relevant departments include water resources, housing and construction, finance, development and reform committee, transportation, forestry, reservoir management, and poverty alleviation office.