

Project Administration Manual

Project Number: 48055-002
November 2016

People's Republic of China: Jiangxi Xinyu Kongmu
River Watershed Flood Control and Environmental
Improvement Project

ABBREVIATIONS

ADB	-	Asian Development Bank
CQS	-	consultants' qualifications selection
DMF	-	design and monitoring framework
EA	-	executing agency
EIA	-	environment impact assessment
EMP	-	environment management plan
EPB	-	environment protection bureau
FCUR	-	Foreign Capital Utilization Report
FSR	-	feasibility study report
FEM	-	flood and environmental management
FMA	-	financial management assessment
GAP	-	gender action plan
GRM	-	grievance redress mechanism
ICB	-	international competitive bidding
LAR	-	land acquisition and resettlement
NCB	-	national competitive bidding
PAM	-	project administration manual
PMO	-	project management office
PPMS	-	project performance management system
PRC	-	People's Republic of China
QCBS	-	quality- and cost-based selection
RP	-	resettlement plan
SDAP	-	social development action plan
SOE	-	statement of expenditures
SPS	-	Safeguard Policy Statement
XCG	-	Xinyu City Government
XCDRC	-	Xinyu City Development and Reform Commission
XCFB	-	Xinyu City Finance Bureau
XCPMO	-	Xinyu City Project Management Office
XCPLG	-	Xinyu City Project Leading Group
XURCIG	-	Xinyu Urban and Rural Construction Investment Group Company, Ltd.

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Project Administration Manual Purpose and Process

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with the policies and procedures of the government and Asian Development Bank (ADB). The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Xinyu City Government (XCG) is wholly responsible for the implementation of ADB-financed projects, as agreed jointly between the borrower and ADB, and in accordance with the policies and procedures of the government and ADB. ADB staff is responsible for supporting implementation including compliance by XCG of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At loan negotiations, the borrower and ADB shall agree to the PAM and ensure consistency with the Loan agreement. Such agreement shall be reflected in the minutes of the loan negotiations. In the event of any discrepancy or contradiction between the PAM and the Loan agreement, the provisions of the Loan agreement shall prevail.

After ADB Board approval of the project's report and recommendations of the President (RRP), changes in implementation arrangements are subject to agreement and approval pursuant to relevant government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval, they will be subsequently incorporated in the PAM.

I. PROJECT DESCRIPTION

A. Rationale

1. In step with the rapid economic growth that has taken place since 1985, a large number of people and assets have accumulated on floodplains in the People's Republic of China (PRC). As a result, the PRC is facing more damaging floods along with serious environmental consequences. Projected climate change impacts will likely exacerbate this trend by increasing the frequency and severity of flooding, as seen in the flood disaster that occurred in July 2016 in the Yangtze River basin (YRB), the second most expensive natural disaster in the PRC's history.¹ Unlike past disasters, the July 2016 flood caused loss and damage in small watersheds, which the Government of the PRC had not prioritized for investment. Cities' master plans in the PRC do not sufficiently use an integrated flood and environmental management (FEM) approach that considers hazards, exposure, vulnerability, and capacity. The government requested the Asian Development Bank (ADB) to provide lending support to demonstrate integrated and climate-resilient FEM harmonized with urban planning in Xinyu City in the Kongmu River watershed. The request is consistent with the recently released outline of the YRB economic belt master plan, which highly prioritizes environmental protection, water management, and flood risk reduction.

2. Xinyu City is a new industrial city located in Jiangxi Province and had 1.17 million inhabitants (63.4% rural and 36.6% urban) in 2015. A significant portion of the city is situated on the Kongmu River watershed, a small watershed 500 square kilometers in size in the Ganjiang River sub-basin in the YRB. Various locations in Xinyu City along the Kongmu River experience annual floods due to low flood control and retention capacities. From 2001 to 2016 eight severe flood events were recorded, the worst of which in 2010 forced 78,000 people to evacuate and destroyed over 4,000 homes and 25 square kilometers of crops, causing \$116 million in direct economic damage. Xinyu City also suffered major historical floods in 1953, 1955, 1962, 1977, 1982, and 1989. The average annual damage due to floods in Xinyu City is \$54 million.²

3. The project is located in the upper Kongmu River watershed, which covers three townships (Guanchao, Ouli, and Xiacun) and a new subdistrict in Yushui District within Xinyu City.³ In the upper Kongmu River watershed, 35 villages currently house 109,580 people, of whom 55,762 reside in river corridors in the project area. Most are exposed to floods and lack access to modern wastewater and solid waste facilities, a factor that exacerbates flooding and water quality degradation in both the upper Kongmu River watershed and downstream Xinyu City. Inhabitants of the upper Kongmu River watershed suffer from flash floods that develop with little warning, giving them insufficient time to save valuables and evacuate timely. Approximately 94% of villagers obtain water from springs and shallow wells, only 6% have access to tap water, about 77% use public or pit toilets, and 23% have indoor flush toilets connected to septic tanks.

4. Current inhabitants of the upper Kongmu River watershed are mostly farmers with an average annual income of \$1,409⁴ and average land holding size of 1.2 *mu*.⁵ Yushui District, in the Kongmu River watershed, has 9,541 inhabitants and a poverty rate of 2.7%. The newly

¹ The July 2016 flood caused \$28 billion in damages in the YRB. Aon. Investor News. <http://ir.aon.com/about-aon/investor-relations/investor-news/default.aspx>.

² Calculated from Xinyu City flood disaster information.

³ The XCG is developing a new subdistrict to (i) cater to its rapidly expanding population and industries, and (ii) take advantage of new business opportunities created by a new high-speed railway station.

⁴ These data are from the socioeconomic survey conducted by the project preparatory technical assistance consultant team in 2016 and from the 2014 Xinyu and Jiangxi Province statistical yearbooks.

⁵ A *mu* is a Chinese unit of measurement (1 *mu* = 666.67 square meters).

planned subdistrict will have a population of 57,500 by 2020 and 130,000 by 2030. Xinyu City is required to (i) manage its environment, (ii) safeguard ecological security, (iii) improve water management, and (iv) undertake environmentally friendly and climate-resilient urban development to provide sustainable livelihood opportunities to both upstream and downstream communities.

5. **Unintegrated rural and urban flood management.** Approximately 8,000 people currently live in areas highly prone to flash flood hazards in the upper Kongmu River watershed, without flood control infrastructure or an early warning system. The rest of the people in the watershed's 35 villages are exposed to riverine floods. The new subdistrict is exposed to flash, riverine, and urban floods, and may exacerbate downstream flooding by increasing stormwater runoff due to land use changes. If a flood similar in size to the 2010 flood occurs in the watershed again, it would create \$185 million in damage. By 2030, flood damage would reach \$589 million with ongoing development, and \$677 million with development in an adverse climate change scenario.

6. The Kongmu River watershed has six existing small lakes, which are not used for flood retention due to their low level outlets and sedimentation caused by adjacent farming practices. The Baiyun reservoir, which supplies water to Xinyu City, is running at only 0.7 million cubic meters (m^3) of its full capacity (4.2 million m^3) due to operational restrictions imposed by riverine and backwater flooding. This has hindered the targeted level of flood control in the downstream Xinyu City by 50% in a 10-year return period, and 5% in a 50-year return period.

7. **Inadequate management of wastewater and solid waste.** Pollutant levels in all lakes and tributaries in the upper Kongmu River watershed exceed national standards due to domestic wastewater discharge, agricultural nonpoint source pollution, and the inefficient collection and disposal of solid waste. The existing combined sewer and stormwater pipeline network in Xinyu City is designed for small storm events not exceeding a 2-year return period; yet, over 50-year return period events have already occurred in the city since 2007, resulting in an overflow of untreated wastewater into the river. The upper watershed generates over 39 tons of solid waste per day; this is projected to increase to 66 tons per day by 2020. The new subdistrict will further strain solid waste and wastewater management by producing 150 tons of solid waste and 12,500 m^3 of wastewater per day by 2020. Xinyu City lacks a proper waste collection and transportation system.⁶ The main source of drinking water for Xinyu City is located downstream of these villages and the proposed subdistrict. Without improving waste management and operation and maintenance (O&M), these issues will increase flood and environmental risks in the Kongmu River watershed and threaten Xinyu City residents' drinking water supply.

8. **Insufficient flood and environmental risk management capacity.** The XCG's investment has not yet been sufficient to mitigate the damage due to high levels of hazards, exposure, and vulnerability to floods. Despite several large flood events, flood hazard mapping and risk mapping have not yet been done, as the city development plans do not use risk mapping and climate-sensitive land-use planning sufficiently. Levels of awareness and preparedness, and the response capacities of local governments and communities are low. The centralized flood forecasting system does not cover the communities in the upper Kongmu watershed. The Kongmu River watershed has no rain gauge and only a few water-level gauge and water quality monitoring stations. The present flood forecasting system relies on rainfall data from adjacent river basins, which is not a sound approach due to the highly heterogeneous

⁶ The wastewater and solid waste from the project area will be treated in the existing Xiacun wastewater treatment plant and Xinyu solid waste incineration plant, both of which are located in Yushui District.

spatial distribution of rainfall in the region. To aid flash flood forecasting in the upper Kongmu River watershed, additional hydrological observation stations and different flood modeling techniques are required. The integrated FEM approach is yet to be embedded in the city's master plan.

9. **Strategic fit.** For the implementation of the outline of the YRB economic belt master plan, the project will timely demonstrate the new benchmarks for investment in FEM.

10. The project also contributes to the PRC's goal of building a harmonious and prosperous society through environmentally sustainable growth, and is consistent with the PRC's Thirteenth Five-Year Plan, 2016–2020, which highlights the importance of flood risk management, and water pollution control.⁷ The project also contributes to the implementation of ADB's country partnership strategy for the PRC, 2016–2020, of which three of the five main principles—(i) managing climate change and environment, (ii) supporting inclusive economic growth, and (iii) fostering knowledge cooperation—are reflected well in the proposed project.⁸ The project is also consistent with (i) ADB's Water Operational Plan, 2011–2020, which emphasizes integrated water resources management (IWRM) with focus on water-related disaster risk management,⁹ and (ii) sustainable development goals 6, 11, and 13.¹⁰

11. **Lessons.** The project design incorporates lessons from previous ADB-financed projects and policy-oriented studies on IWRM, environmental and ecosystem improvement, wetland and lake management and restoration, and urban–rural integration in the PRC.¹¹ Lessons from past and ongoing ADB support in the PRC for the water sector include (i) nonstructural measures and community participation, (ii) continuous O&M with sustainable financial sources, and (iii) management and data information systems for IWRM decision-making. Other lessons reflected in the project design are (i) institutional and financial management reforms contributing to sustainable FEM, (ii) capacity development for project implementation and O&M, and (iii) an effective project monitoring and evaluation system.

B. Impact and Outcome

12. The project's impact will be quality of the living environment in Xinyu City improved. The project's outcome will be FEM in the upper Kongmu River watershed improved.

C. Outputs

13. **Output 1: Integrated rural and urban flood management infrastructure constructed.** This output will include (i) increased flood retention capacity in the upper Kongmu River watershed through (a) stormwater management (including rainwater interception), and (b)

⁷ Xinhuanet. 2015. Highlights of Proposals for China's 13th Five-Year Plan. 4 November. http://news.xinhuanet.com/english/photo/2015-11/04/c_134783513.htm.

⁸ ADB. 2016. *Country Partnership Strategy: Transforming Partnership: People's Republic of China and Asian Development Bank, 2016–2020*. Manila.

⁹ ADB. 2011. *Water Operational Plan, 2011–2020*. Manila.

¹⁰ United Nations. Sustainable Development Goals. <https://sustainabledevelopment.un.org/?menu=1300>. [Goal 6: Ensure access to water and sanitation for all](#); [Goal 11: Make cities inclusive, safe, resilient, and sustainable](#); and [Goal 13: Take urgent action to combat climate change and its impacts](#).

¹¹ ADB. 2008. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of China for Qingdao Water Resources and Wetland Protection Project*. Manila; ADB. 2008. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to the People's Republic of China for Risk Mitigation and Strengthening of Endangered Reservoirs in Shandong Province Project*. Manila; ADB. 2001. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of China for Yellow River Flood Management Sector Project*. Manila; and ADB. 2008. *Technical Assistance to the People's Republic of China for Implementing the National Flood Management Strategy*. Manila.

the improvement and regulation of small lakes for FEM; and (ii) flood protection along the Kongmu River through the construction of levee- and water-regulating structures.

14. **Output 2: Solid waste and wastewater management systems improved.** This output will include (i) the construction of a wastewater collection network separate from the stormwater collection network, which will improve water quality by reducing sewerage overflows; (ii) the improvement of the solid waste management system, which will reduce the export of solid waste into waterways yielding both water quality and flooding benefits; and (iii) the construction of wetlands in the lakes, canals, and Kongmu River to treat stormwater runoff and improve water quality.

15. **Output 3: Flood and environmental risk management capacity enhanced.** This output will include (i) capacity development for FEM; (ii) the preparation of a land-use plan and building regulations based on flood risk mapping; (iii) nonstructural measures to reduce residents' vulnerability, such as early flood warning, flood proofing, and contingency plans; (iv) climate change monitoring to reduce uncertainty in flood risk design; (v) water quality monitoring; (vi) the establishment of community-based FEM; and (vii) the development of a river basin model to aid river basin planning.

16. **Special features and value addition.** The project is timely in the wake of the recent flood disaster and the preparation and implementation of the YRB economic belt master plan. The project will demonstrate in-country best practices and establish new performance standards and good practices for investment in FEM. It will also provide a conducive opportunity for new dialogue, regional cooperation, and ADB–PRC collaboration for responding to flood risk management and climate variability.

17. The project adopts integrated flood-resilient development planning to maximize flood control and strengthen environmental outcomes.¹² This includes innovative structural measures like multifunctional levees,¹³ underground stormwater storage, sponge city construction,¹⁴ and interconnected flood storage lakes.¹⁵

18. Complementary nonstructural measures include (i) flood early warning systems; (ii) community-based FEM;¹⁶ and (iii) flood-sensitive development planning, including upstream–downstream linkages and rural–urban integration.¹⁷ Flood risk mapping will enhance spatial planning and be further operationalized by the issuance of regulations on land use, river corridor development, and solid waste management; and building standards and codes. These life- and asset-saving measures will directly benefit the current inhabitants and the projected population of approximately 300,000 by 2030, both within and outside the project area.

¹² The project will implement a number of measures that will serve both flooding and environmental needs. The project will improve water quality, largely mitigate flooding in the project area by capturing almost 75% of the peak surface runoff, and reduce annual average flood damage in downstream Xinyu City by \$5.36 million.

¹³ The levee will protect three villages in the project area from both riverine and backwater floods, allowing the reservoir to operate at full capacity (securing an additional 3.5 million m³) and also reducing flood peaks downstream.

¹⁴ A city planning and design approach to absorb rainfall and surface runoff aims to reduce stormwater (urban floods) and polluted runoffs and use this water in eco-friendly ways. The design techniques include permeable surfaces, gardens, rainwater harvesting, green spaces, and lakes.

¹⁵ The existing six small lakes will be interconnected by canals with structures that can regulate the water levels in the lakes and also retain water in the canals to best optimize flood control.

¹⁶ The community-based activities will focus on organization development, capital formation, skill enhancement, gender equity, environmental protection, appropriate technologies, and emergency response.

¹⁷ The project will promote flood and environment sensitive land-use planning in upper Kongmu River watershed that will help safeguard the area (mostly rural) from flood and environmental degradation and mitigate the flood and environmental risks in the downstream area (existing Xinyu City).

19. A summary of the project outputs and components is given in Table 1 below:

Table 1: Summary of Project Outputs and Construction Components

Output	Component	Location	Content
1. Integrated rural and urban flood management infrastructure constructed	1.1 Increase flood retention capacity in the upper Kongmu River watershed	Upper Kongmu districts	i. Construct 16.37 km canals ii. Construct 27,600 m ³ underground stormwater storage iii. Reinforce 6 existing lakes (3,329 m) iv. Lake excavation (267,753 m ³) v. Lake dredging (569,327 m ³) vi. 12 lake's outlets vii. Stormwater network (9.98 km) viii. Pilot-sponge city scheme (Grass ditch, tree planting, permeable paving [3,600 m]) ix. 17 water drops structures x. 1 bridge xi. 31 weirs
	1.2 Flood protection along Kongmu River	Kongmu River	i. 1 Pump station ii. 1 Sluice gate iii. Flood levee (1.2 km)
2. Solid waste and wastewater management systems improved	2.1 Construction of wastewater collection network	Upper Kongmu	i. Sewage collection system (9.63 km) ii. Two wastewater pump stations with capacity of 15,000t/d and 10,000 t/d
	2.2 Improvement of the solid waste management system	Upper Kongmu Guanchao and Ouli towns	i. 2 transfer stations ii. 42 collection stations iii. Trucks and other equipment iv. Access road (51,382 m)
	2.3 Construction of wetlands and amenity space along the lakes	Upper Kongmu	i. Wetland excavation (796,836 m ³) ii. Construct 113,800 m ² subsurface flow and surface flow wetlands iii. Construct 14,400 m ² ecologic pond iv. Construct 47,500 m ² wetlands along Kongmu River v. Ecological restoration of river (32.7 ha) vi. Greening of canals (16.4 ha) vii. Greenspace in parks (11.1 ha) viii. Water supply pipes (15.25 km) ix. 1 pump station for waste supply intake (5,000 t/d) x. Sprinkler system
3. Flood and environmental risk management capacity enhanced	3.1 Capacity development for FEM in Kongmu River Watershed	Upper Kongmu and Kongmu River	i. Preparation of landuse plan and building regulations ii. Investigate best approach for flood proofing of buildings iii. Prepare emergency response plan iv. Public awareness training for flood and environmental management v. Utilize and improve the river basin model for use in flood forecasting and management vi. Prepare flood inundation maps vii. Training of agency staff viii. Execute project dissemination program including workshops, study tours, knowledge products, project web site
	3.2 Improvement of flood forecasting and warning systems	Upper Kongmu and Kongmu River	i. Upgrade flood warning system ii. Improve the early flood forecasting system for flash floods
	3.3 Improvement of water quality monitoring system for river and wetlands	Upper Kongmu and Kongmu River	i. Establish water quality monitoring system

FEM = flood and environmental management, ha = hectare, km = kilometer, m = meter, m² = square meter, m³ = cubic meter, t/d = ton per day.

Source: Asian Development Bank estimates.

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

Table 2: Project Readiness Activities

Indicative Activities	2016												2017					Responsible Individual/Unit/Agency/Government
	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	
Advance contracting actions (if any)																		EA/IA
FSR approval																		JPDRC
Preparation of FCUP																		PMO
Review and approval of FCUR																		JPDRC, NDRC
Approval for loan negotiations																		MOF
Management review meeting																		ADB
Loan negotiations																		ADB, Government, EA/IA
Establish project implementation arrangements																		EA/IA
ADB Board approval																		ADB
Loan signing																		ADB, Government
Provision of Government legal opinion																		Government
Government budget inclusion																		EA
Loan effectiveness																		ADB, Government

ADB = Asian Development Bank, EA = executing agency, FCUP = foreign capital utilization plan, FCUR = foreign capital utilization report, FSR = feasibility study report, IA = implementing agency, JPDRC = Jiangxi Province Development and Reform Commission, MOF = Ministry of Finance, NDRC = National Development and Reform Commission, PMO = project management office.

Source: Asian Development Bank estimates.

B. Overall Project Implementation Plan

Table 3: Overall Project Implementation Plan

Indicative Activities	2016				2017				2018				2019				2020				2021				2022				2023	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
A. DMF																														
Output 1: Integrated rural and urban flood management infrastructure constructed																														
1.1. Increased flood retention capacity in the upper watershed																														
Engineering design																														
RP update and Land acquisition																														
Civil works procurement																														
Equipment procurement																														
Construction																														
Inspection and delivery																														
1.2. Increased of flood control capacity of Kongmu River																														
Engineering design																														
RP update and Land acquisition																														
Civil works procurement																														
Equipment procurement																														
Construction																														
Inspection and delivery																														
Output 2: Solid waste and wastewater management systems improved																														
2.1. Installation of Wastewater Pipes and Pump Stations																														
Engineering design																														
RP update and Land acquisition																														
Civil works procurement																														
Equipment procurement																														
Construction																														
Inspection and delivery																														
2.2. Improvement of a Solid Waste Management System																														
Engineering design																														
RP update and Land acquisition																														
Civil works procurement																														
Equipment procurement																														
Construction																														
Inspection and delivery																														
2.3. Construction of wetlands in lakes and Kongmu River																														
Engineering design																														
RP update and Land acquisition																														
Civil works procurement																														
Equipment procurement																														
Construction																														
Inspection and delivery																														
Output 3: Flood and environmental risk management capacity enhanced																														
3.1. Capacity development for flood and environmental management in Kongmu River watershed																														
3.2 Flood and environmental risk mapping																														
3.3 Formulation of building codes and landuse regulation																														
3.4 Establish community based system through mobilization																														
3.5. Upgrade the flood forecasting and warning system																														
3.6. Water quality monitor system for river and wetland																														
B. Management Activities																														
External resettlement monitoring and evaluation																														
Loan implementation consulting services																														
Project start-up support consulting services																														
Training																														

DMF = design and monitoring framework, RP = resettlement plan.
Source: Asian Development Bank estimates.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations: Roles and Responsibilities

Table 4: Roles and Responsibility

Project Implementation Organizations	Management Roles and Responsibilities
Jiangxi Provincial Finance Department	<ul style="list-style-type: none"> • Responsible for establishing and maintaining the imprest account on behalf of the executing and implementing agencies. • Provide overall project guidance and coordination • Submit withdrawal applications to ADB • Manage and supervise loan repayment
Xinyu City Government (XCG) (executing agency)	<ul style="list-style-type: none"> • Responsible for overall project implementation, including finance and administration, technical and procurement matters, monitoring and evaluation, and safeguard compliance • Facilitate disbursement through provincial finance department • Facilitate auditing of project account • Supervise the implementing agency (XURCIG) • Participate in training • Execute loan agreement and sign project agreement • Secure funds for repayment of ADB loan and prepare a repayment plan for the loan and interest in accordance with the loan agreement • Responsible for providing counterpart funds
Project Management Office (PMO)	<ul style="list-style-type: none"> • On behalf of XCG, manage all implementation works during preparation and implementation • Coordinate implementation of land acquisition and resettlement activities with land resources bureau and housing management bureau • Coordinate with all involved agencies, departments, and institutes for project implementation • Prepare and update the procurement plan, and other project documents • Prepare project documents and report to XCG and ADB • Review withdrawal applications prepared by the implementing agency (XURCIG) and facilitate submission to ADB through the provincial finance department • Submit project implementation progress reports, safeguards monitoring reports, and annual audit reports to ADB • Submit all procurement and disbursement documents to ADB • Engage all capacity building consultants • Implement capacity development component of the project • Carry out project performance and compliance monitoring • Disclose project-related information and documents in accordance with ADB guidelines
Xinyu City Project Leading Group (XCPLG)	<ul style="list-style-type: none"> • Chaired by the executive vice mayor and consists of the Xinyu City Development and Reform Commission, Xinyu City Finance, Xinyu City Water Affairs Bureau, Xinyu City Land Resources Bureau, Xinyu City Environmental Protection

Project Implementation Organizations	Management Roles and Responsibilities
	<p>Bureau, Xinyu City Housing and Urban and Rural Development Commission</p> <ul style="list-style-type: none"> • Oversee and coordinate project preparation and implementation • Provide policy guidance during preparation and implementation • Meet regularly, discuss and take actions, if necessary, to ensure smooth project implementation
Xinyu Urban and Rural Construction Investment Group Company, Ltd. (XURCIG) (Implementing Agency)	<ul style="list-style-type: none"> • Responsible for day-to-day project implementation activities for all infrastructure subcomponents • Design and procure works and goods under all infrastructure components, and administer and monitor the contractors and suppliers, with the support of design institutes, tendering agent and supervision companies • Undertake contract management, construction supervision and quality control, with the support of supervision companies • Develop project management procedures, implementation plan, and financial management • Maintain separate accounts for the project • Prepare and update the EMP and other project documents • Engage an external monitoring agency for environment • Engage the tendering agency • Organize trainings • Organize project acceptance verification
Xinyu City Water Affairs Bureau (XCWAB)	<ul style="list-style-type: none"> • Provide advice to design institute for design of lakes, canals, levees • Be responsible for operation and maintenance of water infrastructure including lake embankments, pumps and gates • Implement the flood forecasting and warning component
Xinyu City Environmental Protection Bureau (XCEPB)	<ul style="list-style-type: none"> • Supervise and implement the environment monitoring station(s) that will conduct external environmental monitoring during the project implementation • Support the PMO Environmental Officer for EMP implementation
Xinyu City Administration Bureau (XCAB)	<ul style="list-style-type: none"> • Be responsible for operation and maintenance of the sewerage reticulation network and the constructed wetlands
ADB	<ul style="list-style-type: none"> • Support project administration including executing agency and implementing agency compliance of obligations and responsibilities in accordance with ADB policies and procedures • Conduct regular loan review, midterm review, and project completion review missions • Review and approve procurement actions • Approve withdrawal applications and disburse loan proceeds

ADB = Asian Development Bank, EMP = environment management plan, PMO = project management office.

Source: Asian Development Bank estimates.

B. Key Persons Involved in Implementation

Executing Agency

Xinyu City Government

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Mission Leader

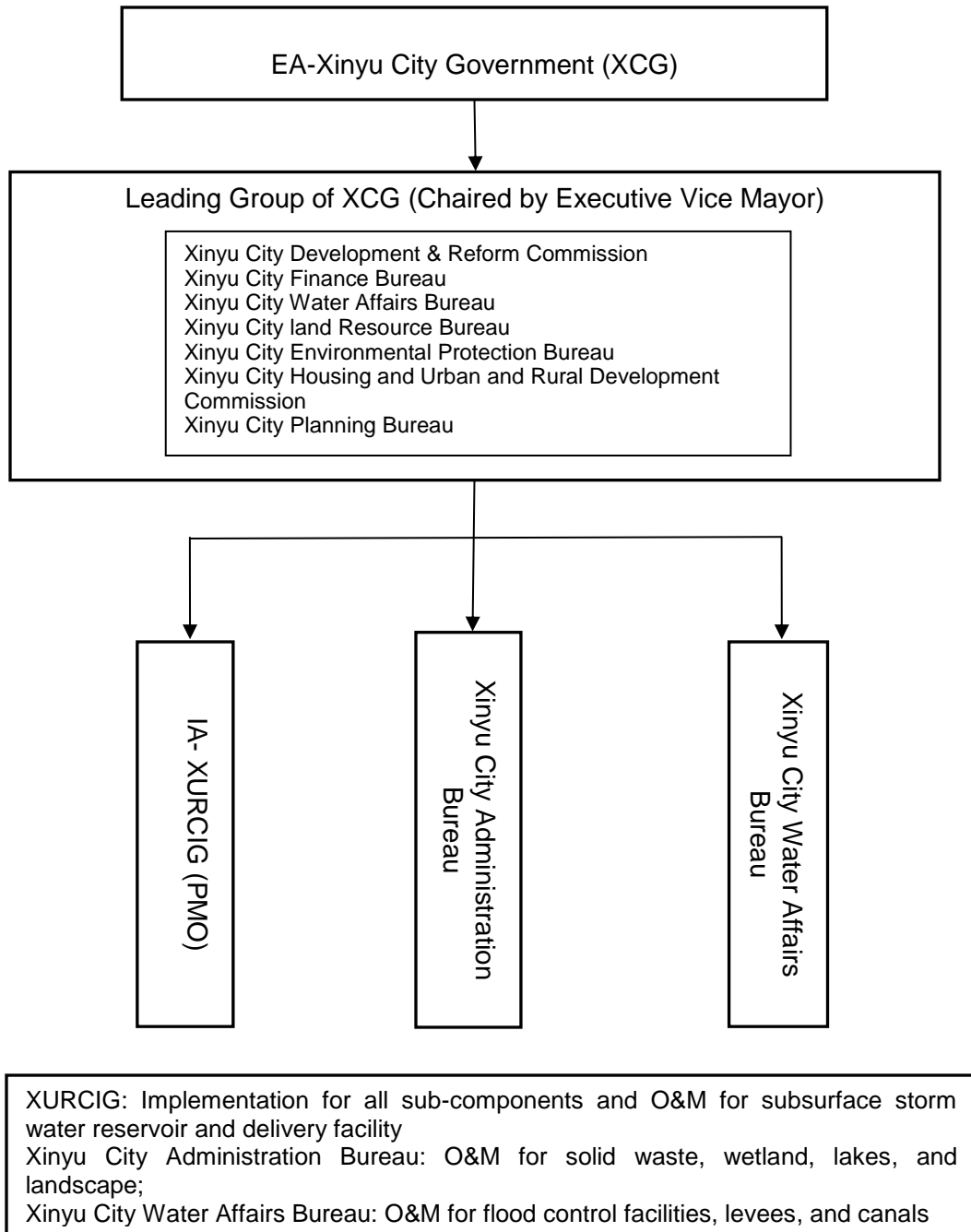
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Email address: rosti@adb.org

C. Project Organization Structure



EA = executing agency, IA = implementing agency, O&M = operation and maintenance, XURCIG = Xinyu Urban and Rural Construction Investment Group Company, Ltd.
 Source: Asian Development Bank estimates.

IV. COSTS AND FINANCING

20. The project is estimated to cost \$300.39 million. The project investment plan is shown in Table 5 below. Detailed cost estimates by expenditure category, financier and output are shown in accompanying tables. Loan proceeds will be disbursed according to the *Loan Disbursement Handbook* (2015, as amended from time to time) and subject to the provisions of the loan Agreement.

Table 5: Project Investment Plan
(\$ million)

Item	Amount ^a
A. Base Costs ^b	
1. Integrated rural and urban flood management infrastructure constructed	103.58
2. Solid waste and wastewater management systems improved	128.58
3. Flood and environmental risk management capacity enhanced	6.18
Subtotal (A)	238.34
B. Contingencies ^c	55.90
C. Financing Charges During Implementation ^d	6.15
Total (A+B+C)	300.39

^a Includes taxes and duties of \$25.16 million to be financed from government resources (\$12.86 million) and Asian Development Bank (ADB) loan resources (\$12.30 million). The inclusion of taxes and duties in ADB-financed project expenditures is consistent with the country partnership strategy for the People's Republic of China, 2016–2020. The financing of taxes and duties does not represent an excessive share of the project cost, and is material and relevant to the project's success. Taxes and duties on the government-financed expenditures will be provided in cash.

^b In 2016 first quarter prices.

^c Physical contingencies computed at 10.0%. Price contingencies computed at 1.5% in 2018, 1.4% in 2019, 1.5% in 2020, 1.5% in 2021, and 1.5% thereafter. Price contingencies on local currency costs are calculated at 2.3% in 2018, 2.4% in 2019, 2.5% in 2020, 2.5% in 2021, and 2.5% thereafter.

^d Includes interest during construction and commitment charges. Interest for the ADB loan has been computed at the 5-year United States dollar fixed swap rate, plus an ADB spread of 0.5% and a maturity premium of 0.1%. Commitment charges for the ADB loan are 0.15% per year to be charged on the undisbursed loan amount.

Source: Asian Development Bank estimates.

21. The government has requested a loan of \$150 million from ADB's ordinary capital resources to help finance the project. The loan will have a 25-year term, including a 6 year grace period, following the straight-line method, an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based leading facility, a commitment charge for undisbursed loan of 0.15% per year (the interest and commitment charge during construction to be capitalized¹⁸ in the loan) and such other terms and conditions set forth in the loan and project agreements. The average loan maturity is 15.75 years and the maturity premium of 0.10% per annum.

22. The XCG will be the legal entity responsible for servicing the ADB loan and providing counterpart funding.

A. Cost Estimates Preparations and Revisions

23. Cost estimates were prepared on behalf of the PMO by the Shanghai Urban Construction Design Institute, in consultation with the implementing agencies and project preparatory technical assistance (PPTA) consultants, and under the guidance of ADB project officer. Costing was

¹⁸ Capitalization of interest and commitment charge means that interest and commitment charge incurred during the project implementation period will be automatically deducted from the loan proceeds rather than requiring borrowers to pay from another source. In such a case, interest will incur to the loan proceeds used to pay for interest and commitment charge. Without this arrangement, on the other hand, the borrower needs to start paying interest and commitment charge from its own resource once the project starts.

completed using Government costing standards, and costing information from site investigations, project files of the design institute and queries with suppliers.

24. Responsibility for revising and updating the cost estimates during implementation rest with the project implementing agency, Xinyu Urban and Rural Construction Investment Group Company, Ltd. (XURCIG), and the PMO located within XURCIG. As the implementing agency, XURCIG, supported by design institutes, a tendering agent, supervision companies and implementation consultants, is responsible for design and procurement, and the administration and monitoring of contractors and suppliers. The revision of cost estimates will be undertaken in the course of the execution of these responsibilities. Cost evaluations will occur and revisions made as necessary at detailed design, during the review of tenders and during the monitoring of contract execution.

B. Key Assumptions

25. The following key assumptions underpin the cost estimates and financing plan:

- (i) Exchange rate: CNY6.62 = \$1.00 (as of 20 August 2016).
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are as follows:

Table 6: Escalation Rates for Price Contingency Calculation

Item	2018	2019	2020	2021	2022	2023	Average
Domestic rate of price inflation	2.3%	2.4%	2.5%	2.5%	2.5%	2.5%	2.45%
Foreign rate of price inflation	1.5%	1.4%	1.5%	1.5%	1.5%	1.5%	1.5%

- (iii) The executing and implementing agencies have assured ADB that counterpart funding will be provided or secured in a timely, including any additional counterpart funding required for any shortfall of funds or cost overruns.

26. The indicative financing plan is in Table 7. The executing and implementing agencies have assured ADB that counterpart funding will be provided or secured in a timely, including any additional counterpart funding required for any shortfall of funds or cost overruns.

Table 7: Indicative Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank	150.00	49.94
Xinyu City Government	150.39	50.06
Total	300.39	100.00

Source: Asian Development Bank estimates.

C. Detailed Cost Estimates by Expenditure Category

Table 8: Detailed Cost Estimates by Expenditure Category

Item	CNY million			\$ million			% of Total Base Cost
	Foreign Exchange	Local Currency	Total Cost	Foreign Exchange	Local Currency	Total Cost	
A. Investment Costs							
1. Civil works	0.00	1,029.16	1,029.16	0.00	155.46	155.46	51.75
2. Equipment and goods	0.00	137.27	137.27	0.00	20.74	20.74	6.90
3. Land acquisition and resettlement	0.00	249.06	249.06	0.00	37.62	37.62	12.52
4. Survey, design, supervision and monitoring	0.00	139.10	139.10	0.00	21.01	21.01	7.00
5. Consulting	18.89	0.00	18.89	2.85	0.00	2.85	0.95
6. Training	0.00	2.65	2.65	0.00	0.40	0.40	0.13
7. Monitoring	0.00	1.66	1.66	0.00	0.25	0.25	0.08
Subtotal (A)	18.89	1,558.90	1,577.79	2.85	235.48	238.34	79.34
B. Contingencies							
1. Physical	1.89	155.89	157.78	0.29	23.55	23.83	7.93
2. Price	1.09	211.21	212.30	0.16	31.90	32.07	10.68
Subtotal (B)	2.98	367.10	370.08	0.45	55.45	55.90	18.61
C. Financing Charges During Implementation							
1. Interest Charges	35.31	0.00	35.31	5.33	0.00	5.33	1.78
2. Commitment fee	5.40	0.00	5.40	0.82	0.00	0.82	0.27
Subtotal (C)	40.71	0.00	40.71	6.15	0.00	6.15	2.05
Total Project Cost (A+B+C)	62.58	1,926.00	1,988.58	9.45	290.94	300.39	100.00

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

D. Allocation and Withdrawal of Loan Proceeds

Table 9: Allocation and Withdrawal of Loan Proceeds

Item	Total Amount Allocated for Financing Category (\$)	ADB Financing Percentage and Basis for Withdrawal from the Loan Account
1. Civil works *	119,861,305	77.1% of total expenditure claimed
2. Equipment and goods*	20,736,157	100.0% of total expenditure claimed
3. Consulting*	2,853,000	100.0% of total expenditure claimed
4. Training*	400,000	100.0% of total expenditure claimed
5. Interest during construction and commitment fees	6,149,538	100.0% of amount due
Total	150,000,000	

* No withdrawals shall be made from the Loan Account until XCG shall enter into one or more contracts acceptable to the Asian Development Bank (ADB) with the Nanchang Public Utility Group or another company or agency acceptable to ADB for expansion of the Xiacun wastewater treatment plant to a capacity of 25,000 m³/day.

Source: Asian Development Bank estimates.

E. Detailed Cost Estimates by Financier

Table 10: Detailed Cost Estimates by Financier

Item	ADB		Xinyu City Government		Total costs
	Amount (\$ million)	% Cost category	Amount (\$ million)	% Cost category	
A. Investment Costs					
1. Civil works	119.86	77.1	35.60	22.9	155.46
2. Equipment and goods	20.74	100.0	0.00	0.0	20.74
3. Land acquisition and resettlement	0.00	0.0	37.62	100.0	37.62
4. Survey, design, supervision and monitoring	0.00	0.0	21.01	100.0	21.01
5. Consulting	2.85	100.0	0.00	0.0	2.85
6. Training	0.40	100.0	0.00	0.0	0.40
7. Monitoring	0.00	0.0	0.25	100.0	0.25
Subtotal (A)	143.85	60.4	94.49	39.6	238.34
B. Contingencies					
1. Physical	0.00	0.0	23.83	100.0	23.83
2. Price	0.00	0.0	32.07	100.0	32.07
Subtotal (B)	0.00	0.0	55.90	100.0	55.90
C. Financing Charges During Implementation					
1. Interest Charges	5.33	100.0	0.00	0.0	5.33
2. Commitment fee	0.82	100.0	0.00	0.0	0.82
Subtotal (C)	6.15	100.0	0.00	0.0	6.15
Total Project Cost (A+B+C)	150.00	49.9	150.39	50.1	300.39

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

F. Detailed Cost Estimates by Outputs

Table 11: Detailed Cost Estimates by Outputs
(\$ million)

Item	Total	Integrated rural and urban flood management infrastructure constructed		Solid waste and wastewater management systems improved		Flood and environmental risk management capacity enhanced	
		Amount	% Cost category	Amount	% Cost category	Amount	% Cost category
A. Investment Costs							
1. Civil works	155.46	76.87	49.4	78.45	50.5	0.14	0.1
2. Equipment and goods	20.74	0.10	0.5	18.10	87.3	2.54	12.2
3. Land acquisition and resettlement	37.62	16.89	44.9	20.74	55.1	0.00	0.0
4. Survey, design, supervision and monitoring	21.01	9.72	46.3	11.29	53.7	0.00	0.0
5. Consulting	2.85	0.00	0.0	0.00	0.0	2.85	100.0
6. Training	0.40	0.00	0.0	0.00	0.0	0.40	100.0
7. Monitoring	0.25	0.00	0.0	0.00	0.0	0.25	100.0
Subtotal (A)	238.34	103.58	43.5	128.58	53.9	6.19	2.6
B. Contingencies							
1. Physical	23.83	10.36	43.5	12.86	53.9	0.62	2.6
2. Price	32.07	14.59	45.5	16.98	53.0	0.49	1.5
Subtotal (B)	55.90	24.95	44.6	29.84	53.4	1.11	2.0
C. Financing Charges During Implementation							
1. Interest Charges	5.33	1.97	36.9	3.00	56.2	0.37	6.9
2. Commitment fee	0.82	0.35	43.5	0.44	53.9	0.02	2.6
Subtotal (C)	6.15	2.32	37.7	3.44	55.9	0.39	6.4
Total Project Cost (A+B+C)	300.39	130.85	43.6	161.86	53.9	7.69	2.6

Note: Numbers may not sum precisely because of rounding

Source: Asian Development Bank estimates

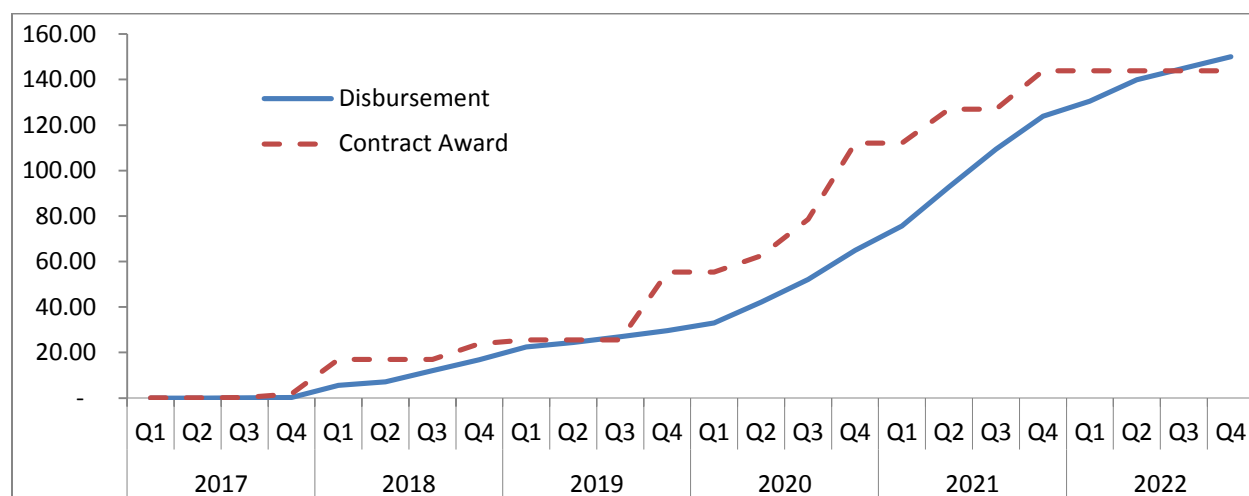
G. Detailed Cost Estimates by Year**Table 12: Detailed Cost Estimates by Year**
(\$ million)

	Total costs	2017	2018	2019	2020	2021	2022
A. Investment Costs							
1. Civil works	155.46	0.01	2.46	11.41	20.39	70.44	50.76
2. Equipment and goods	20.74	0.25	0.76	0.51	9.61	9.35	0.25
3. Land acquisition and resettlement	37.62	0.00	2.31	27.06	8.25	0.00	0.00
4. Survey, design, supervision and monitoring	21.01	0.00	0.30	6.01	6.30	4.20	4.20
5. Consulting	2.85	0.29	0.86	0.57	0.57	0.29	0.29
6. Training	0.40	0.02	0.04	0.10	0.10	0.08	0.06
7. Monitoring	0.25	0.01	0.03	0.06	0.06	0.05	0.04
Subtotal (A)	238.34	0.59	6.75	45.72	45.28	84.41	55.60
B. Contingencies							
1. Physical	23.83	0.06	0.67	4.57	4.53	8.44	5.56
2. Price	32.07	0.01	0.38	3.99	5.29	12.46	9.93
Subtotal (B)	55.90	0.07	1.06	8.56	9.82	20.90	15.49
C. Financing Charges During Implementation							
1. Interest Charges	5.33	0.01	0.06	0.34	0.84	1.62	2.47
2. Commitment fee	0.82	0.22	0.22	0.18	0.14	0.06	0.00
Subtotal (C)	6.15	0.23	0.27	0.52	0.98	1.68	2.47
Total Project Cost (A+B+C)	300.39	0.89	8.08	54.80	56.08	106.99	73.56
% Total Project Cost	100.0%	0.3	2.7	18.2	18.7	35.6	24.5

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

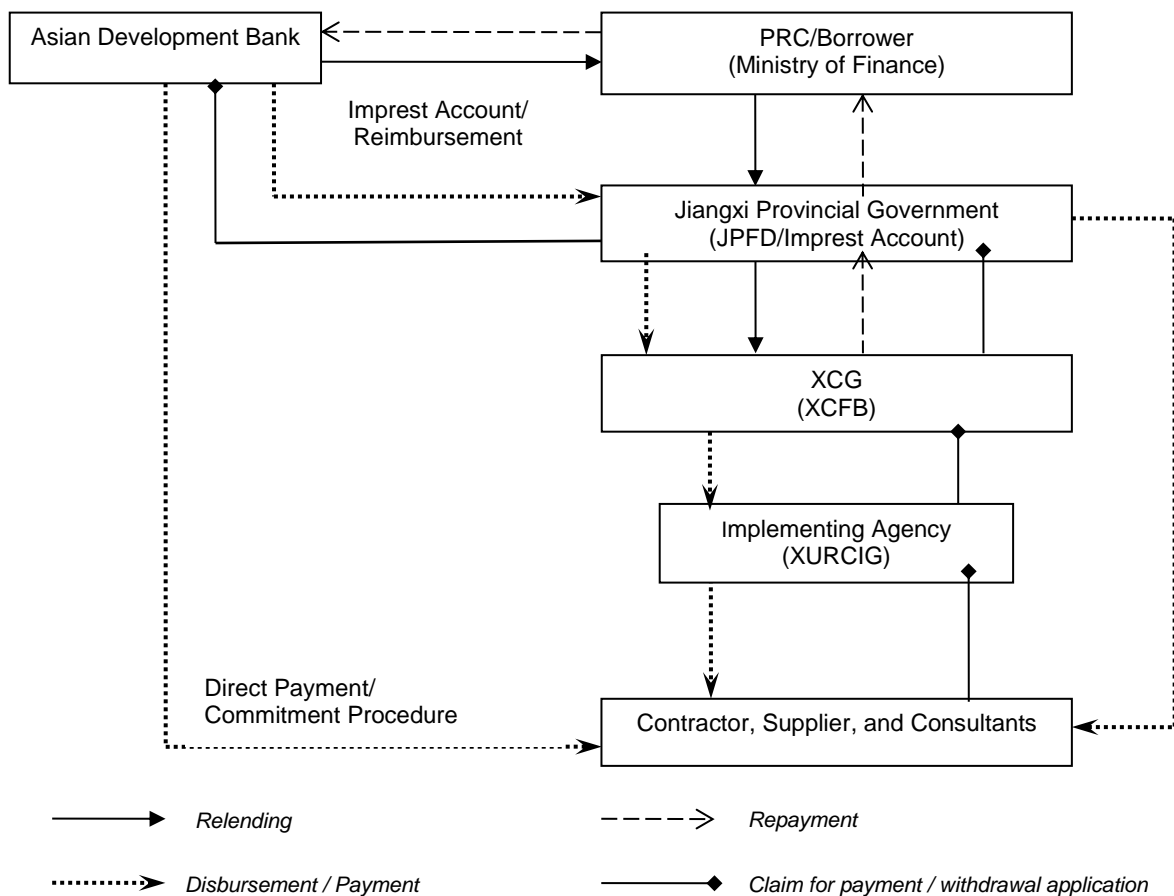
H. Contract Awards and Disbursement S-Curve



(\$ million)

Year	Disbursement					Contract Award				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2017	-	0.01	0.01	0.13	0.16	0.06	-	0.10	1.61	1.77
2018	5.38	1.61	4.89	4.74	16.62	15.13	-	-	7.03	22.16
2019	5.62	2.02	2.53	2.75	12.92	1.60	-	-	29.81	31.41
2020	3.30	9.10	9.97	12.88	35.26	-	7.26	15.99	33.50	56.75
2021	10.63	17.19	16.64	14.52	58.97	-	14.90	-	16.86	31.76
2022	6.60	9.43	5.10	4.96	26.08	-	-	-	-	-
Total					150.00					143.85

I. Fund Flow Diagram



PRC = People's Republic of China, JPFD = Jiangxi Provincial Finance Department, XCG = Xinyu City Government, XCFB = Xinyu City Finance Department, XURCIG = Xinyu City Urban and Rural Construction Investment Group.
Source: Asian Development Bank estimates.

V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

27. A financial management assessment, completed under the project preparatory technical assistance, considered the financial management capacity of Xinyu City Finance Bureau (on behalf of the executing agency, XCG) and the implementing agency, XURCIG. The assessment examined funds-flow arrangements, staffing, accounting and financial reporting systems, internal and external auditing arrangements, and financial information systems.

28. The assessment determined that the main financial management risks are: (i) implementation risk—delays in project implementation caused by a lack of familiarity with ADB disbursement procedures and requirements, (ii) compliance risk—delays in project reporting and the identification of issues on the use of loan proceeds due to lack of familiarity with ADB financial management requirements, particularly for accounting, reporting and auditing, (iii) financing risk—delays and shortfalls in the provision of counterpart funding which could delay project implementation, and (iv) construction and operational risk—insufficient experience in construction and operational management for some project components that could hamper project progress and result in poorer quality of services provided after project completion. The overall financial management risk-rating of the project before considering mitigating measures is moderate. The identified financial management risks will be closely monitored during project implementation.

29. The proposed financial management action plan includes: (i) covenants in loan and project agreements to ensure adequate counterpart funds to support capital, operating and maintenance, and debt repayment requirements; (ii) training of XCFB and XURCIG staff in ADB disbursement procedures and requirements prior to loan effectiveness; (iii) training of XCFB and XURCIG staff in ADB financial management requirements, specifically accounting, reporting and auditing prior to loan effectiveness; (iv) close monitoring to allow timely identification of potential issues in counterpart funding; and (v) inclusion of a financial management expert and professional engineers in the capacity building package in output 3 to provide necessary guidance and professional financial management and engineering support and training for the financial and related staff in the project entities.

30. Project arrangements with appropriate mitigations are considered satisfactory.

B. Disbursement

1. Disbursement Arrangements for ADB Funds

31. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2015, as amended from time to time), and detailed arrangements agreed upon between the government and ADB. Online training for project staff on disbursement policies and procedures is available.¹⁹ Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

32. The implementing agency, through the PMO, will be responsible for all disbursement arrangements including (i) preparing disbursement projections, (ii) requesting budgetary allocations for counterpart funds, (iii) collecting supporting documents, and (iv) preparing and sending withdrawal applications to ADB.

¹⁹ Disbursement eLearning. http://wpqr4.adb.org/disbursement_elearning

33. **Imprest fund procedure.** An imprest account should be established and maintained by JPFD on behalf of the executing and implementing agencies for each funding source. The currency of the imprest account is the US dollar. The imprest account is to be used exclusively for ADB's share of eligible expenditures. The executing agency, through JPFD, who established the imprest account in its name, is accountable and responsible for proper use of advances to the imprest account.

34. The total outstanding advance to the imprest account should not exceed the estimate of ADB's share of expenditures to be paid through the imprest account for the forthcoming 6 months. The executing agency may request for initial and additional advances to the imprest account based on an Estimate of Expenditure Sheet.²⁰ Supporting documents should be submitted to ADB or retained by the executing and implementing agencies in accordance with ADB's *Loan Disbursement Handbook* (2015, as amended from time to time) when liquidating or replenishing the imprest account.

35. **Statement of expenditure procedure.**²¹ The SOE procedure may be used for reimbursement of eligible expenditures or liquidation of advances to the imprest account. The ceiling of the SOE procedure is the equivalent of \$200,000 per individual payment. Supporting documents and records for the expenditures claimed under the SOE should be maintained by the implementing agency, through the PMO, and made readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit. Reimbursement and liquidation of individual payments in excess of the SOE ceiling should be supported by full documentation when submitting the withdrawal application to ADB.

36. Before the submission of the first withdrawal application, the executing agency, through JPFD, should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is US\$100,000 equivalent. Individual payments below this amount should be paid (i) by the executing agency (or implementing agency) and subsequently claimed to ADB through reimbursement, or (ii) through the imprest fund procedure, unless otherwise accepted by ADB. No withdrawals shall be made from the loan account until XCG shall enter into one or more contracts acceptable to ADB with Nanchang Public Utility Group or another company or agency acceptable to ADB for expansion of the Xiacun wastewater treatment plant to a capacity of 25,000 m³/day.

2. Disbursement Arrangements for Counterpart Fund

37. For the domestic funds, the executing agency will allocate the designated funding for the project as specified in the project agreement. Counterpart funds from the government will be disbursed and liquidated by the executing agency to contractors and service providers. Disbursement of counterpart funds will follow this process: (i) according to the progress of the contract, the implementing agency will submit disbursement request to the PMO; and (ii) once approved, counterpart funds will be disbursed from JPFD.

C. Accounting

38. The XURCIG will maintain separate books and records by funding source for all expenditures incurred on the project. The XURCIG will prepare consolidated project financial

²⁰ ADB. 2015. *Loan Disbursement Handbook*. 10B.

²¹ SOE forms are available in Appendix 9B and 9C of ADB's *Loan Disbursement Handbook* (2015, as amended from time to time).

statements annually in accordance with the government's accounting laws and regulations, which are consistent with international accounting principles and practices.

D. Auditing and Public Disclosure

39. The executing and implementing agencies will cause the detailed consolidated project financial statements to be audited in accordance with International Standards on Auditing and the Government Auditing Standards of the PRC (where these are consistent with International Standards on Auditing), by an independent auditor acceptable to ADB. The audited project financial statements together with the auditor's opinion will be presented in English to ADB within 6 months from the end of the fiscal year by the implementing agency.

40. The audit report for the project financial statements will include a management letter and auditor's opinions, which cover (i) whether the project financial statements present an accurate and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; (ii) whether the proceeds of the loan were used only for the purpose(s) of the project; and (iii) whether the borrower or executing and implementing agencies were in compliance with the financial covenants contained in the loan and project agreements.

41. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor.

42. The government, executing and implementing agencies have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.²² ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

43. Public disclosure of the audited project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Public Communications Policy 2011.²³ After the review, ADB will disclose the audited project financial statements and the opinion of the auditors on the project financial statements no later than 14 days of ADB's

²² ADB's approach and procedures regarding delayed submission of audited project financial statements:

- (i) When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that (a) the audit documents are overdue; and (b) if they are not received within the next 6 months, requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- (ii) When audited project financial statements are not received within 6 months after the due date, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (a) inform the executing agency of ADB's actions; and (b) advise that the loan may be suspended if the audit documents are not received within the next 6 months.
- (iii) When audited project financial statements are not received within 12 months after the due date, ADB may suspend the loan.

²³ Public Communications Policy: <http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications>

confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited project financial statements will not be disclosed.²⁴

²⁴ This type of information would generally fall under public communications policy exceptions to disclosure. ADB. 2011. *Public Communications Policy*. Paragraph 97(iv) and/or 97(v).

VI. PROCUREMENT AND CONSULTING SERVICES

44. Works will be procured for flooding control, landscape, constructed wetlands, flooding control, storm water collection system and wastewater collection system, and solid waste transfer stations construction, etc. Goods will be procured for office equipment, subsurface service delivery system, solid waste collection and transfer stations, water quality monitoring and early flood warning system. Consulting services will be procured for project implementation consulting service, external resettlement monitoring, project implementation start-up supports, capacity building for Kongmu River flood control and environment improvement, etc.

45. A project procurement risk assessment was conducted for the project, in accordance with the Guide on Assessing Procurement Risks and Determining Project Procurement Classification.

46. The main weaknesses identified include: (i) lack of experience of the PMO and the executing and implementing agencies in internationally-financed projects; (ii) some discrepancies between domestic and ADB practices; and (iii) lack of procedures in place for procurement management and project implementation.

47. Proposed mitigation measures include intensive training to be provided to relevant staff of the PMO, executing and implement agencies, and other stakeholder agencies. The training should include topics in ADB procedures for procurement of goods, works and consulting services, and should be organized before any procurement activity is commenced. It is recommended that the PMO, through the implementing agency, develop a project management (including procurement) protocol with assistance from consultants.

A. Advance Contracting and Retroactive Financing

48. Advance contracting and retroactive financing will apply to the recruitment of project start-up consulting services for (a) project management and procurement (Appendix 3), and (b) land acquisition and resettlement (Appendix 4). All advance contracting and retroactive financing will be undertaken in conformity with ADB Procurement Guidelines (2015, as amended from time to time) and ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The issuance of invitations for bids under advance contracting and retroactive financing will be subject to ADB approval. The borrower, and the executing and implementing agencies have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the project.

49. **Advance contracting.** Advance contracting will be undertaken with the following conditions: (i) resettlement plan and environment management plan (EMP) have been reviewed and cleared by ADB; (ii) in case land acquisition and resettlement (LAR) activities commence ahead of approval of the final resettlement plan, resettlement due diligence report (by an external monitor, confirming that the resettlement plan implementation is in accordance with the originally agreed resettlement plan and ADB policies and procedures) should be prepared in addition to the resettlement plan itself; and (iii) all conditions precedent to contract award such as approval of finalized resettlement plan (and due diligence report) reflecting detailed measurement survey and approval of project environmental impact assessment (EIA).

50. **Retroactive financing.** The executing agency was advised that retroactive financing may only apply up to the equivalent of 20% of the total ADB loan, to cover eligible expenditures incurred for works, goods and consulting services procured through advance contracting before loan effectiveness, but not more than 12 months before the signing of the loan agreement.

B. Procurement of Goods, Works, and Consulting Services

51. All procurement of goods and works will be undertaken in accordance with ADB's Procurement Guidelines (2015, as amended from time to time).

52. International competitive bidding (ICB) procedures will be used for civil works contracts estimated to cost \$40 million equivalent or above and for goods valued at \$3 million equivalent or more.

53. Before the start of any procurement, ADB and the government will review the public procurement laws of the central and state governments to ensure consistency with ADB's Procurement Guidelines (2015, as amended from time to time).

54. An 18-month procurement plan indicating threshold and review procedures, goods, works, and consulting service contract packages and national competitive bidding guidelines is in Section C.

55. All consultants will be recruited according to ADB's Guidelines on the Use of Consultants (2013, as amended from time to time).²⁵ Through 4 out of 5 packages (another one for external M&E), 231 person-months (23 international, 208 national) of consulting services are required to (i) facilitate project management and implementation, and (ii) strengthen the institutional and operational capacity of local government and public awareness on flood risk management and environment management. Consulting firms will be engaged using the quality- and cost-based selection (QCBS) method with a standard quality–cost ratio of 80:20.

C. Procurement Plan

56. A procurement plan indicating procurement or selection methods, estimated costs of contracts, thresholds and review procedures for goods, works, and consulting service contract packages is found below. The procurement plan shall be executed in the manner in which it has been approved by ADB. The procurement plan shall be updated annually or as needed throughout the duration of the project.

Basic Data

Project Name: Jiangxi Xinyu Kongmu River Watershed Flood Control and Environmental Improvement Project	
Project Number: 48055	Approval Number:
Country: People's Republic of China	Executing Agency: Xinyu City Government
Project Procurement Classification: B	Implementing Agency: Xinyu Urban and Rural Construction Investment Group Company, Ltd.
Procurement Risk: Moderate	
Project Financing Amount: US\$300.39 million ADB Financing: US\$150 million Non-ADB Financing: US\$150.39 million	Project Closing Date: 30 June 2023
Date of First Procurement Plan: 4 November 2016	Date of this Procurement Plan: 4 November 2016

²⁵ Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>

A. Methods, Thresholds, Review, and 18-Month Procurement Plan

1. Procurement, Consulting Methods, and Thresholds

57. Except as ADB may otherwise agree, the following process thresholds shall apply to procurement of goods and works:

Procurement for Goods and Works		
Methods	Threshold (\$)	Comments
International Competitive Bidding (ICB) for works	=> \$40,000,000	
International competitive bidding for goods	=> \$3,000,000	
National competitive bidding for works	> \$100,000 and < \$40,000,000	The first NCB is subject to prior review, thereafter post review.
National competitive bidding for goods	> \$100,000 and < \$3,000,000	The first NCB is subject to prior review, thereafter post review.
Shopping for works	=< \$100,000	
Shopping for goods	=< \$100,000	
Community participation for works	=< \$100,000	

Procurement for Consulting Services	
Methods	Comments
Quality and Cost Based Selection (QCBS)	- A consultant team for project management support (about \$1.00 million) - A consultant team for Kongmu River flood control and environmental management capacity building (about \$1.60 million)
CQS	- An external monitor for resettlement monitoring and evaluation (about \$0.19 million)
ICS	- Two individual consultants for project implementation startup support consulting services

2. Goods and Works Contracts Estimated to Cost \$1 Million or More

58. The following table lists goods and works contracts for which the procurement activity is either ongoing or expected to commence within the next 18 months:

Package Number	General Description	Estimated Value (\$ million)	Procurement Method	Review (Prior/ Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comment
Goods							
FCLW-CW-2	Civil works for flood control, constructed wetlands, and landscape (Yudai River, Cloud River, Qing River, Yudai Lake, Qinghu Lake, Yi Lake, Cloud Lake, Xiayi Lake)	19.63	NCB	Prior	1S1E	Q3/2017	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Works First NCB civil works

3. Consulting Services Contracts Estimated to Cost \$100,000 or More

59. The following table lists consulting services contracts for which the recruitment activity is either ongoing or expected to commence within the next 18 months:

Package Number	General Description	Estimated Value (\$ million)	Recruitment Method	Review (Prior/Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
CS1	Project management support	1.00	QCBS	Prior	Q1/2017	STP	Assignment: International quality-cost ratio: 80/20
CS2	External resettlement monitoring services	0.19	CQS	Prior	Q1/2017	CQS	99 PM Assignment: National 30 PM; For advance contracting

CQS = consultants' qualification selection, FTP = full technical proposal, ICS = individual consultant selection, PM = person-month, QCBS = quality- and cost-based selection.

4. Goods and Works Contracts Estimated to Cost Less than \$1 million and Consulting Services Contracts Less than \$100,000 (Smaller Value Contracts)

60. The following table groups smaller-value goods, works, and consulting services contracts for which the activity is either ongoing or expected to commence within the next 18 months:

Goods and Works							
Package Number	General Description	Estimated Value (\$ million)	Procurement Method	Review (Prior/Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
S-E-1	Office equipment	0.098	Shopping	Post		Q3/2017	

Consulting Services							
Package Number	General Description	Estimated Value (\$ million)	Recruitment Method	Review (Prior/Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
CS3-a	Project Startup consulting services_ Project management and procurement specialist	0.036	ICS	Prior	Q4/2016		Assignment: National 4 PM; Advance Contracting
CS3-b	Project Startup consulting services_ Resettlement specialist	0.027	ICS	Prior	Q4/2016		Assignment: National 3 PM; Advance Contracting

B. Indicative List of Packages Required under the Project

61. The following table provides an indicative list of goods, works, and consulting services contracts over the life of the project, other than those mentioned in previous sections (i.e., those expected beyond the current period):

Package Number	General Description	Estimated Value (\$ million)	Procurement Method	Review (Prior/ Post)	Bidding Procedure	Advertisement Date (quarter/ year)	Comments
FC-ME-01	Equipment for water quality monitoring, (monitoring points in Kongmu River, and fixed monitoring points in constructed wetlands)	0.45	NCB	Post	1S1E	Q2/2020	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Goods
FC-ME-02	Equipment for flood monitoring and early warning system, and rainfall and water level stations	2.08	NCB	Prior	1S1E	Q2/2020	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Goods
WW-ME-01	Equipment supply and installation for wastewater facilities of Xiangyun Road	15.99	ICB	Prior	1S1E	Q1/2020	First NCB for goods Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Goods
SW-ME-01	Equipment supply for solid waste collection and transportation, and transfer station in Highspeed Railway New City	1.00	NCB	Post	1S1E	Q2/2021	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Goods
SW-ME-02	Equipment supply for solid waste collection and transportation in Ouli Town	0.33	NCB	Post	1S1E	Q2/2021	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Goods

Package Number	General Description	Estimated Value (\$ million)	Procurement Method	Review (Prior/ Post)	Bidding Procedure	Advertisement Date (quarter/ year)	Comments
SW-ME-03	Equipment supply for solid waste collection and transportation, transfer station in Guanchao Town	0.78	NCB	Post	1S1E	Q2/2021	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Goods
FCLW-CW-01	Civil works for flood control, constructed wetlands, and landscape (Qingquan Lake and canals to connect the lake and Xia River)	10.45	NCB	Prior	1S1E	Q2/2020	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Works
FCLW-CW-03	Civil works for flood control, constructed wetlands, and landscape (Xiaxi River [both North and South]) including a bridge	13.97	NCB	Prior	1S1E	Q4/2020	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Works
FCLW-CW-04	Civil works for flood control, constructed wetlands, and landscape (Xiangllong Lake and Xianglong River [connecting the lake and a small lake])	9.12	NCB	Post	1S1E	Q2/2018	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Works
FCLW-CW-05	Civil works for flood control, constructed wetlands, and landscape (Shen Lake and Shin Ha)	8.31	NCB	Post	1S1E	Q2/2019	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Works
FCLW-CW-06	Civil works for flood control, constructed wetlands, and landscape (Tian Lake, Yun Lake, Milky Way, and Yun River, and pre-warning center)	19.13	NCB	Prior	1S1E	Q2/2021	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Works

Package Number	General Description	Estimated Value (\$ million)	Procurement Method	Review (Prior/ Post)	Bidding Procedure	Advertisement Date (quarter/ year)	Comments
FCLW-CW-07	Civil works for Kongmu River flood control (including civil works of embankment, constructed wetlands, pump station, and embankment management building)	9.41	NCB	Post	1S1E	Q4/2019	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Works
SW-CW-01	Civil works for garbage collection stations and transfer station in High Speed New Area	0.54	NCB	Post	1S1E	Q4/2020	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Works
SW-CW-02	Civil works for garbage collection stations in Ouli Town and cleaning of existing garbage	0.92	NCB	Post	1S1E	Q4/2020	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Works
SW-CW-03	Civil works for garbage collection stations and transfer station in Guanchao Town and cleaning of existing garbage	1.03	NCB	Post	1S1E	Q4/2020	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Works
WW-CW-01	Civil works for wastewater facilities of Xiangyun Road, and wastewater pump stations	30.35	NCB	Prior	1S1E	Q2/2019	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Works
WW-CW-02	Civil works for the other sewers, stormwater pipelines, permeable pavement, and road landscaping	29.72	NCB	Prior	1S1E	Q2/2020	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Works

Package Number	General Description	Estimated Value (\$ million)	Procurement Method	Review (Prior/Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
WW-CW-03	Civil works for sewers (Chuangye Road)	2.86	NCB	Post	1S1E	Q4/2020	Prequalification of Bidders: N Domestic Preference Applicable: N Bidding Document: Works Assignment: International
CS4	Integrated capacity building for Kongmu River flood control and environment improvement	1.60	QCBS	Prior		Q4/2018	Type of Proposal: FTP Quality-Cost Ratio: 80/20 88 PM

C. National Competitive Bidding

I. Regulation and Reference Documents

62. The procedures to be followed for national competitive bidding shall be those set forth in The Government Procurement Law of People's Republic of China approved on 29 June 2002 and Law of the People's Republic of China on Bid Invitation and Bidding of the People's Republic of China promulgated on August 30, 1999 with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of the ADB Procurement Guidelines.

II. Procurement Procedures

1. **Competitive Bidding Procedure** (Procurement Law Art. 26 and Law on Bidding Art. 10).

63. Public tendering is the acceptable method of government procurement, and public invitation is the accepted bid invitation mode.

2. Eligibility

64. The eligibility of bidders shall be as defined under section I of the Procurement Guidelines; accordingly, no bidder or potential bidder should be declared ineligible for reasons other than those provided in section I of the Guidelines, as amended from time to time.

3. Advertising

65. All invitations to prequalify or to bid shall be advertised in the national press (China Daily Newspaper) or a free and open access website (www.chinabidding.com). Such advertisement shall be made in sufficient time for prospective bidders to obtain prequalification or bidding documents and prepare and submit their responses. In any event, a minimum preparation period of twenty-eight (28) days shall be given. The preparation period shall count (a) from the

date of advertisement, or (b) when the documents are available for issue, whichever date is later. The advertisement and the prequalification and bidding documents shall specify the deadline for such submission.

4. Bidding Period

66. The minimum bidding period is 28 days prior to the deadline for the submission of bids.

5. Participation by Government-Owned Enterprises

67. Government owned enterprises in the Borrower's country may be permitted to bid if they can establish that they (a) are legally and financially autonomous, (b) operate under commercial law and (c) are not a dependent agency of the Borrower/Project Executing Agency.

6. Rebidding

68. Re-bidding shall not be allowed solely because the number of bids is less than three (3).

III. Bidding Documents

7. Qualification Requirements

69. Qualification requirements of bidders and the method of evaluating the qualification of each bidder shall be specified in detail in the bidding documents, and in the prequalification documents if the bidding is preceded by a prequalification process.

8. Bid Submission and Opening

70. Bidders shall be allowed to submit bids by mail or by hand.

71. All bids shall be opened in public; all bidders shall be afforded an opportunity to be present (either in person or through their representatives) at the time of bid opening, but bidders shall not be required to be present at the bid opening.

9. Bid Evaluation and Award

72. No bid may be rejected solely on the basis that the bid price falls outside any standard contract estimate, or margin or bracket of average bids established by the Borrower/Project Executing Agency.

73. Each contract shall be awarded to the lowest evaluated responsive bidder, that is, the bidder who meets the appropriate standards of capability and resources and whose bid has been determined (a) to be substantially responsive to the bidding documents and (b) to offer the lowest evaluated cost. The winning bidder shall not be required, as a condition of award, to undertake responsibilities for work not stipulated in the bidding documents or otherwise to modify the bid as originally submitted.

10. ADB Policy Clauses

74. Each contract financed with the proceeds of the Loan shall provide that the suppliers and contractors shall permit ADB, at its request, to inspect their accounts and records relating to

the performance of the contract and to have said accounts and records audited by auditors appointed by ADB.

75. A provision shall be included in all bidding documents for NCB works and goods contracts financed by ADB stating that the Borrower shall reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question.

76. A provision shall be included in all bidding documents for NCB works and goods contracts financed by ADB stating that ADB will declare a firm or individual ineligible, either indefinitely or for a stated period, to be awarded a contract financed by ADB, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices or any integrity violation in competing for, or in executing, ADB-financed contract.

D. Consultant's Terms of Reference

77. The terms of reference for all consulting services packages are detailed in Appendix 1–5.

VII. SAFEGUARDS

A. Environment

78. **Environment due diligence.** The project is classified as Category B for environment. An Initial Environmental Examination (IEE) Report, including an Environmental Management Plan (EMP), was prepared and disclosed on the ADB website.²⁶ The IEE complies with ADB's policies and requirements including ADB's Safeguard Policy Statement (2009).²⁷ The IEE concludes that the project's anticipated environmental impacts can be addressed through the mitigation measures prescribed in the EMP. The EMP includes mitigation and monitoring requirements and institutional responsibilities to ensure proper environmental management throughout the project construction and operation.

79. **Updating the EMP and inclusion in bidding documents.** In the design stage the executing agency will forward the EMP to the design institutes for incorporating the mitigation measures into the detailed technical designs. In the event that any changes are made to the designs approved by ADB, the EMP will be updated as needed. To ensure that bidders respond to the EMP provisions, the PMO and implementing agency will prepare and provide the following specification clauses for incorporation into the bidding documents: (i) a list of environmental management requirements to be budgeted by the bidders in their proposals, (ii) environmental clauses for contractual terms and conditions, and (iii) the updated IEE and EMP, and, the domestic environmental impact assessment reports.

80. **EMP implementation.** The executing and implementing agencies will be responsible for ensuring that the project will be designed, constructed, decommissioned, and operated in accordance with (i) the national and local government environmental, health and safety laws, regulations, procedures, and guidelines; (ii) ADB's Safeguard Policy Statement (2009), and (iii) the IEE including the EMP. The executing agency holds final responsibility for the implementation and compliance with the EMP. The contractors and construction supervision companies will be responsible for internal environmental monitoring and supervision during construction, respectively. Environmental impact monitoring will be conducted by the local environment monitoring stations, contracted by the executing agency. Roles and responsibilities to implement the EMP are defined in Attachment 1. The project implementation management support consulting services will include a loan implementation environment consultant (LIEC), environmental engineer, and constructed wetland specialist. These specialists will support the PMO and contractors in implementing the EMP.

81. **Budget requirements for EMP.** The executing and implementing agencies shall make available the necessary budgetary and human resources to fully implement the EMP. If any unanticipated environmental risks and impacts arise during construction or operation of the project that were not considered during the environmental assessments, the executing agency, through the implementing agency, shall promptly inform ADB in writing of the occurrence of such risks or impacts, with detailed description of the event and the proposed action plan for incorporation in the updated EMP.

²⁶ The initial environmental examination is a linked document to the RRP and was disclosed in the ADB website on 22 September 2016 (<https://www.adb.org/projects/documents/prc-jiangxi-xinyu-kongmu-river-watershed-flood-control-iee>).

²⁷ ADB's Safeguard Policy Statement (2009) is available both in English and Chinese language (<http://www.adb.org/Documents/Policies/Safeguards/Safeguard-Policy-Statement-June2009.pdf>) and (<http://www.adb.org/Documents/Translations/Chinese/Safeguard-Policy-Statement-cn.pdf>)

82. **Capacity building.** The executing and implementing agencies have no previous experience with ADB-funded projects or safeguard requirements. To ensure effective implementation of the EMP, a capacity building program will be implemented on EMP implementation, supervision, and reporting, the Grievance Redress Mechanism (GRM), and the design and O&M of “sponge city” guidelines and the constructed wetlands. Training will be provided by the LIEC and other experts under the loan implementation consultant services. Trainees will include the staff of PMO, implementing agency, construction supervision companies and contractors. Training programs will cover: (i) EMP adjustment and implementation; (ii) GRM; (iii) Environmental protection and monitoring; and (iv) Sponge City/Constructed Wetland O&M.

83. **Grievance Redress Mechanism.** A GRM has been developed in compliance with ADB’s SPS (2009) requirement to address environmental, health, safety, and social concerns associated with project construction, operation, and land acquisition arrangements. The details of the GRM, including a time-bound flow chart of procedures, are included in the project EMP and RP; the complaint channels are slightly different for environmental and resettlement issues, but the PMO will maintain an integrated system to document, follow-up and reports on all cases.

B. Resettlement

84. **Introduction.** The project is classified as Category A in terms of involuntary resettlement and a Resettlement Plan (RP) has been prepared in accordance with ADB’s Safeguard Policy Statement (SPS 2009).

85. Since the detailed measurement surveys have not been conducted, the current RP is considered draft and will need to be updated and the updated RP will need to be resubmitted to ADB for approval prior to commencement of LAR and award of civil works contract. The update will be based on the final design, census of affected persons and inventory of losses (land and fixed assets). The executing and implementing agencies will re-endorse the updated RP and re-disclose to affected villages. The contract for any civil works involving resettlement impacts will not be awarded until the updated RP is approved by ADB.

86. **Scope of Resettlement Impacts.** In order to avoid or minimize the impacts of land acquisition and resettlement (LAR), consultations were conducted with the local government departments, village committees and affected persons during the preparation of the RPs. Based on the latest FSR, the project will affect 5 villages with 13 village groups of 1 sub-district (Yangtiangang) and 2 towns (Guancao and Xiacun) in one district (Yushui), respectively, in the project area.

87. The project will require a total area of 2,441.35 mu of land to be permanently occupied, including acquisition of 2,290.48 mu²⁸ collectively-owned land and occupation of 150.87 mu state-owned land. The project will temporarily occupy 37.2 mu of collective land in total. In addition, some rural houses need to be demolished in a total area of 24,657.06 m², in which 19,581.61 m² are residential houses, and the remaining 5,075.45 m² are non-residential houses. The project will affect 1,078 households with 3,693 persons permanently and 119 households with 405 persons²⁹ temporarily, totaling 1,197 households with 4,098 persons (Table 13).

88. **Resettlement Policy Framework and Compensation Rates.** The objective of resettlement, according to both the PRC laws and regulations and ADB’s SPS, is to achieve at

²⁸ 1 mu = 1/15 hectare = 666.67 m²

²⁹ Both are affected by permanent land acquisition.

least the same or better income, livelihood and living conditions. Based on consultations with the executing and implementing agencies, PMO, local government departments and affected persons as well as the practical experiences in the project area, the following principles of resettlement are agreed for the project:

- Avoid or minimize resettlement, wherever feasible;
- Compensation and entitlements provided to the affected persons (APs) will be adequate to at least maintain their “without project” standard of living, and have prospects of improvement;
- All APs will be provided with resettlement assistance and granted fair compensation;
- Where post-requisition cultivated land per capita is not sufficient to maintain livelihood, compensation in cash or kind for replacement land for other income-generating activities will be provided for the APs;
- All the APs will be adequately informed on eligibility, compensation rates and standards, livelihood and income restoration plans, project timing, and will be involved in the RP implementation process;
- No land requisition will take place unless replacement land or sufficient compensation for resettlement is given to the APs;
- The executing and implementing agencies, PMO, and an independent / third party will monitor compensation and resettlement operations;
- Vulnerable groups will receive special assistance to ensure they are better off, so that such APs listed in the RP will have the opportunity to benefit from the project;
- RPs will be integrated with the overall City / District planning; and
- The resettlement budget will adequately cover the full aspects of all compensation required.

89. The land acquisition and resettlement compensation policies and standards will follow the Land Administration Law of the People’s Republic of China (2004), Decision of the State Council on Deepening the Reform and Rigidly Enforcing Land Administration (SC [2004] No.28) (October 21, 2004), and other applicable guidelines. They will also be based on local policies regarding land acquisition and resettlement (LAR) in Jiangxi Province, and ADB’s SPS.

90. Compensation for acquisition of collectively-owned land includes land compensation, resettlement subsidies, young crop compensation and ground attachment compensation (see rates in Table 14). As practice is in the project area, it was agreed that the land compensation will be equally divided among APs and the remaining farmland will be equally allocated after land acquisition. Compensation for houses, young crops, trees and other associated facilities and impacts of temporary land occupation is directly paid to the APs.

91. Compensation for rural houses will be made according to the principle of full replacement cost. All the affected households (HHs) opted for free resettlement houses³⁰ plus monetary compensation³¹ and are willing to move into the resettlement community³² which will

³⁰ Every normal affected household can obtain two sets of free resettlement houses with 110 m² of construction area per house. The affected households who prefer cash provision shall be paid at the price of CNY800/m² based on the area of resettlement houses, totally CNY176,000 per household.

³¹ Beside free resettlement houses, affected households will receive cash compensation based on the cost and original house area. The compensation rates of demolished houses are: CNY520/m² for brick-concrete structure; CNY280/m² for brick-timber structure. House facilities will be paid at cost price.

³² Shendi Garden Resettlement Community is located in northeast corner of the center of High-speed Rail Zone, bounded by Yudai Lake Park on the east, Xianglong Avenue on the north, Changshan Road on the west, and Xinyu North Station of High-speed Railway on the west. The total area of the community is 110,792.8 m² (166.2 mu), and the construction area is 200,000 m².

be constructed by local government. The relocated HHs will also receive subsidies in the transition period, demolition reward and moving subsidies (Table 15).

92. All APs are eligible to receive compensation and assistance. The cut-off date for certification of such entitlement, 25 July 2016, has been disclosed to all the APs during the measurement survey of resettlement impacts.

93. **Resettlement and Rehabilitation Measures.** Under the project, an evaluation was conducted over the land losses of affected villager groups and the income restoration plan included in the RP. These will be subject to further negotiation and discussion with the APs during the detailed design stage, and the final findings and results integrated into the updated RP.

94. In general, the income restoration options include:

- (i) Agricultural resettlement actions mainly including increase land output through crop improvement and land improvement, continuing agricultural growing activities;
- (ii) Non-agricultural resettlement. Surplus labor arising from land acquisition, in particular, the young and middle-aged laborers, will be resettled through labor transfer and reemployment. The main sources of jobs include employment opportunities in nearby industry zones, jobs created by the project, and other public service jobs. In addition, APs who choose to run their own business will be provided with financial support in the form of micro-credit loan;
- (iii) Training of agricultural and non-agricultural skills provided free to the APs to enable them to develop various means of making a living; and
- (iv) Endowment insurance provided to eligible farmers affected by land acquisition or rural-urban social welfare insurance. The APs who have been engaged in the urban-rural integrated pension program can increase their pay level after they receive the compensation of land acquisition. The land expropriated farmers³³ (LEF) can join in the urban worker pension program. Local government will provide subsidies for the endowment programs of affected persons.

95. In terms of non-residential building demolition, the owner of one affected pig farm will be compensated based on the price of market assessment after consultation. The affected persons will be provided fruits and vegetable planting guidance or skill training and loan for entrepreneurship to restore livelihoods.

96. **Resettlement budget and financing plan.** The initial LAR budget is estimated to be CNY 273.97 million (Table 16). The detailed budget of the resettlement will be updated upon the finalization of the compensation policy and project design, and included in the final RP following the detailed design. The resettlement fund will be financed and paid by the executing agency as a part of the total project investment. A compensation agreement will be negotiated and entered into with the village / community committees and the affected HHs during the LAR implementation.

97. **Institutional Arrangements.** The Xinyu City Government is the executing agency of the Project and has established the Project Leading Group (PLG) to be wholly responsible for comprehensive planning and decision-making for the Project. Xinyu Urban and Rural Construction Investment Group Company, Ltd. (XURCIG) is the implementing agency, and the PMO is responsible for management and coordination of the project. The Resettlement Office

³³ The households whose per capita farmland is no more than 0.3 mu.

(Comprehensive Department under the XURCIG), a subsidiary unit of the XURCIG, is the resettlement implementation agency and responsible for the implementation of the RP along with affected sub-districts and communities, while the towns and villages in the project area will provide assistance in the preparation and implementation of the RP.

98. To ensure smooth implementation, the staff in charge of LAR will undertake training on resettlement implementation to be organized by the PMO. A resettlement start-up consultant will provide training in ADB's policy requirements and will assist the implementing agency and PMO to update and finalize the RP. The RP will be (i) updated based on the final design, detailed measurement survey and census of APs, (ii) disclosed to affected persons, and (iii) submitted to ADB for review and approval prior to the award of civil works contract and commencement of land acquisition or house demolition.

99. The resettlement implementation schedule has been prepared based on the preparation and construction timetable (see Table 17).

100. **Grievance Redress Mechanism.** A grievance redress mechanism (GRM) has been developed in compliance with ADB's SPS (2009) requirement to address environmental, health, safety, and social concerns associated with project construction, operation, and land acquisition arrangements. The details of the GRM, including a time-bound flow chart of procedures, are included in the project EMP and RP; the complaint channels are slightly different for environmental and resettlement issues, but the PMO will maintain an integrated system to document, follow-up and reports on all cases.

101. Persons affected by LAR may file an appeal on any aspect of resettlement, including compensation rates, etc. The means of appeal, and the names, locations, persons responsible and telephone numbers of the appeal accepting agencies will be communicated to the APs at meetings, through an announcement or the resettlement information booklet, so that the affected persons know their right of appeal. Mass media will be used to strengthen publicity and reporting, and comments and suggestions on resettlement from all parties concerned will be shared by the resettlement organization. All agencies will accept grievances and appeals from the affected people for free, and costs so reasonably incurred will be disbursed from the contingency costs.

102. During the design and implementation periods of the project, these appeal procedures will remain effective to ensure that the affected people can use them to address relevant issues. Affected persons can also submit complaints to ADB which will first be handled by the project team. If an affected person is still not satisfied and believes he/she has been harmed due to non-compliance with ADB policy, s/he may submit a complaint to ADB's Accountability Mechanism.³⁴

103. **Monitoring and Evaluation.** A detailed plan for both the internal and external monitoring is included in the resettlement plan. PMO will include a summary of internal monitoring in the semi-annual project progress reports submitted to ADB. Furthermore, PMO will employ an external resettlement monitoring institute or firm to monitor and evaluate resettlement progress and results. A baseline survey for a sample of affected persons will be completed before the LAR begins. After that, semiannual monitoring reports will be prepared and submitted for ADB's review during resettlement implementation and annual reports within two years after completion of resettlement.

³⁴ For further information, see: <http://www.adb.org/Accountability-Mechanism/default.asp>

Table 13. Summary of Resettlement Impacts by Component

Component		(1) Flood management				(2) Waste water Pipes and Pump Stations	(3) Greenspace			(4) Sponge city	(5) Solid waste manage ment	(6) Wetland	Total
		Flood protection levee	Canals	Lake excavation	Flood warning and forecast center		Greenspace inside the parks	Greenway of roads	Greenway of watercourse				
Permanently occupied land (mu)	Collective land	82.98	290.8	801.17	57.94	0.46	111.52	135.42	408.29	180.99	4.6	216.31	2,290.48
	State-owned land	0	8.94	0	0	0	7.97	52.6	12.54	68.82	0	0	150.87
	Total	82.98	299.74	801.17	57.94	0.46	119.49	188.02	420.83	249.81	4.6	216.31	2,441.35
Temporarily occupied land(mu)	Collective land	1.2	0	0	0	36	0	0	0	0	0	0	37.2
HD (m ²)	Rural residential houses	7,815.47	4,534.07	0	0	0	0	0	7,232.07	0	0	0	19,581.61
	Rural non-residential houses	0	0	0	0	0	0	0	0	0	0	5,075.45	5,075.45
	Total	7,815.47	4,534.07	0	0	0	0	0	7,232.07	0	0	5,075.45	24,657.06
Affected population	Permanently affected	LA	AHs	1,078									
			APs	3,693									
		HD	APs	57									
			APs	293									
		Both LA and HD	AHs	57									
			APs	293									
		Subtotal	AHs	1,078									
			APs	3,693									
	Tempor	Temporary	AHs	119									

Component			(1) Flood management				(2) Waste water Pipes and Pump Stations	(3) Greenspace			(4) Sponge city	(5) Solid waste manage ment	(6) Wetland	Total					
			Flood protection levee	Canals	Lake excavation	Flood warning and forecast center		Greenspace inside the parks	Greenway of roads	Greenway of watercourse									
	arily affected	land occupation	APs	405															
	Total		AHs	1,197															
			APs	4,098															

Notes:

(i) mu = a Chinese unit of measurement (1 mu = 666.67 m²).

(ii) All the household and persons in the affected groups are identified as affected population as the land compensation will be equally divided among them and the rest farmland will be averagely allocated again after land acquisition.

(iii) The affected population is hard to be divided to different subcomponent since they will affect several village groups in fact.

(iv) Subsurface service delivery system will use the land acquired by sponge city subproject.

AH = affected household, AP = affected person, HD = house demolition, LA = land acquisition, m² = square meter.

Source: Asian Development Bank estimates.

Table 14: Compensation Rates for Land Acquisition

No.	Land Type	Compensation rates (CNY/mu)	Applicable scope	Remarks
1	Cultivated Land (including young crops)	38,335	Guanchao Town, Xiacun Town, New Hupi Village	As practice in the project area, the land compensation will be equally divided among APs and the remaining farmland will be averagely allocated again after land acquisition. Compensation for young crops, trees and other associated facilities is directly paid to the APs.
2	Vegetable Plot (including young crops)	38,335		
3	Pond Surface	24,200		
4	Woodland	12,700		
5	Garden Plot (including compensation for fruit trees)	42,080		
6	House site	24,200		

Source: Asian Development Bank estimates.

Table 15: Resettlement Measures of Households Affected by House Demolition

(A) Resettlement houses without charge				
Resettlement houses	Every normal affected household can obtain 2 sets of free resettlement houses with 110 m ² of construction area per house			The affected households who prefer cash provision shall be paid at the price of CNY800/m ² based on the area of resettlement houses, totaling CNY176,000 per household.
(B) Cash Compensation of original demolished houses				
Category	Structure	Grade	Compensation Standards (CNY/m ²)	Remarks
Compensation for HD	Brick-concrete	A	520	Steel-concrete foundation, outer wall with tile\glaze tile (wall paint), steel window
		B	500	Steel-concrete foundation, whitewash, door, window
		C	460	Steel-concrete foundation, blank room
	Brick-wood		350	
	Earth-wood		200	
	Steel Shed		100	
	Simple Houses		80	
	Simple Shed		40	
Other Compensation	Interim Transition Allowance	CNY/m ²	2	Exchange of titles: 15 months allowance, if the housing delivery exceeding the set time limit, an owner can be paid 2 times of interim transition allowance. Monetary compensation: 6 months allowance
	Relocation Fees	CNY/m ² every time	1.5	2 times
	Demolition Reward	CNY/m ²	15	According to the area of houses

CNY = yuan, HD = house demolition, m² = square meter.
Source: Asian Development Bank estimates.

Table 16: Budget of Resettlement Costs
(Unit: CNY10,000)

No.	Item	(1) Flood management				(2) Waste water Pipes and Pump Stations	(3) Greenspace			Sponge city	Solid waste management	Wetland	Total
		Flood protection levee	Canals	Lake excavation	Flood warning and forecast center		Greenspace inside the parks	Greenway of roads	Greenway of watercourse				
1	Basic LA and DH Costs	1,165.92	2,176.53	2,317.37	255.43	11.1	346.18	1,478.51	3,120.68	1,932.19	6.72	558.36	13,369
1.1	Permanent Occupation of State-owned Land	0	178.8	0	0	0	159.4	1052	250.8	1376.4	0	0	3017.4
1.2	Acquisition of Collective Land	297.69	903.94	2015.11	222.11	1.17	141.63	233.66	1234.77	303.76	5.84	307.89	5667.59
1.3	Temporary Land Occupation	0.36	0	0	0	8.48	0	0	0	0	0	0	8.84
1.4	Residential HD	715.79	809.9	0	0	0	0	0	1228.06	0	0	0	2753.75
1.5	Non-residential HD	0	0	0	0	0	0	0	0	0	0	177.64	177.64
1.6	Ground Attachments (15% of subtotal of items 1.1 - 1.4)	152.08	283.9	302.27	33.32	1.45	45.15	192.85	407.05	252.02	0.88	72.83	1743.78
2	Supporting Fund for Vulnerable Groups (0.5% of basic costs)	5.83	10.88	11.59	1.28	0.06	1.73	7.39	15.6	9.66	0.03	2.79	66.84
3	Resettlement Planning and Monitoring Costs	17.49	32.65	34.76	3.83	0.17	5.19	22.18	46.81	28.98	0.1	8.38	200.53
4	Resettlement Management Costs	34.98	65.3	69.52	7.66	0.33	10.39	44.36	93.62	57.97	0.2	16.75	401.07
5	Training Costs	11.66	21.77	23.17	2.55	0.11	3.46	14.79	31.21	19.32	0.07	5.58	133.69
6	Taxes and Fees on LA	309.95	1590.37	2118.85	403.65	2.61	486.97	653.89	2321.55	865.28	20.09	879.01	9652.21
7	LA and HD Costs (subtotal of Items 1-6)	1,545.83	3,897.49	4,575.26	674.4	14.37	853.93	2,221.11	5,629.47	2,913.4	27.21	1,470.88	23,823.35
8	Contingencies (15% of item 7)	231.87	584.62	686.29	101.16	2.16	128.09	333.17	844.42	437.01	4.08	220.63	3,573.5

No.	Item	(1) Flood management				(2) Waste water Pipes and Pump Stations	(3) Greenspace			Sponge city	Solid waste management	Wetland	Total
		Flood protection levee	Canals	Lake excavation	Flood warning and forecast center		Greenspace inside the parks	Greenway of roads	Greenway of watercourse				
9	Total	1,777.7	4,482.12	5,261.55	775.57	16.53	982.02	2554.28	6,473.89	33,50.41	31.29	1,691.51	27,396.86
10	Percent	6.49%	16.36%	19.20%	2.83%	0.06%	3.58%	9.32%	23.63%	12.23%	0.11%	6.17%	100%

Note: The costs are estimated according to the draft resettlement plan and will be updated along with the finalization of the resettlement plan.

HD = house demolition, LA = land acquisition.

Source: Asian Development Bank estimates.

Table 17: Resettlement Implementation Schedule

No.	Task	Participants	Responsible Agency	Timeline	Remarks
1	Information Disclosure				
1.1	RIB	5 affected villages in Yangtiangang Sub-district, Guanchao Town and Xiachun Town	PMO, Resettlement Office	Aug 2016	
1.2	Disclosure of the RP on ADB's website		PMO, Resettlement Office	Aug 2016	
2	RP and Budget				
2.1	Draft RP and budget approval (compensation rates)	CNY273.9686 million	XCG, PMO, Resettlement Office	Aug 2016	
2.2	Detailed measurement surveys	5 affected villages in Yangtiangang Sub-district, Guanchao Town and Xiachun Town	Resettlement Offices	July 2017	
2.3	RP updating after detailed design	5 affected villages in Yangtiangang Sub-district, Guanchao Town and Xiachun Town	XURCIG, PMO	Aug 2017	
3	LA announcement				
3.1	Disclosure of the final RP	5 affected villages	XCG, PMO	Sep 2017	
3.2	Release of the LA announcement	5 affected villages	XCG	Sep 2017	
4	Compensation Agreement				
4.1	LA and HD compensation agreement	5 affected villages	Resettlement Office	Sep–Oct. 2017	
5	Resettlement				
5.2	Demolition of affected houses	56 HHs	AHs	Nov–Dec 2017	
5.3	Construction of resettlement houses	56 HHs	XCHURDC	Jan–Dec 2017	
5.1	Selection of resettlement houses	56 HHs	XCG, AHs	Jan–Feb 2018	
5.4	Moving into new houses	56 HHs	Affected HHs	Jun 2018	
6	Livelihood Restoration Measures				
6.1	Payment of compensation for	5 affected villages	XCG, AHs	Oct 2017	

No.	Task	Participants	Responsible Agency	Timeline	Remarks
	land acquisition, young crops and attachments				
6.2	Implementation of restoration programs	5 affected villages		2017–2019	
6.3	Implementation of training programs	5 affected villages	Labor and social security bureau	Feb 2017–June 2019	
6.4	Implementing assistance measures for vulnerable households	5 affected villages	Civil affairs bureau, PMO	2017–2020	
6.5	Employing households for employment under the Project	5 affected villages	PMO, labor and social security bureau, contractor	Sep 2017–Dec 2020	
7	Capacity Building of Resettlement Agencies				
7.1	Training of XPMO staff	15 person-times	PMO	July 2017	
7.2	Training of township and sub-district officials	50 person-times	PMO, Resettlement Office	Aug–Sep 2017	
8	Monitoring and Evaluation				
8.1	Baseline survey	5 affected villages	External M&E agency	Aug 2017	
8.2	Establishing an internal monitoring mechanism	As per the RP	PMO, Resettlement Office	Aug 2017	
8.3	Appointing an external M&E agency	One	PMO	Aug 2017	
8.4	Internal monitoring reporting	Semiannual report	PMO, Resettlement Office	From Sep 2017	
8.5	External monitoring reporting	Semiannual report	External M&E agency	Sep 2017	1st report
				Mar 2018	2nd report
8.6	External evaluation reporting	Annual report	External M&E agency	Mar 2018	3rd report
				Jun 2019	4th report
8.7	Completion report	Completion report	PMO, Resettlement Office	Dec 2020	5th report
9	Public Consultation		Resettlement Office	Ongoing	
10	Grievance Redress		Resettlement Office	Ongoing	
11	Disbursement of Compensation Fees				
11.1	Disbursement to the XURCIG	Initial funds	XCG	Aug 2017	
11.2	Disbursement to 5	Initial funds	Resettlement	Sep 2017	

No.	Task	Participants	Responsible Agency	Timeline	Remarks
	affected villages in Yangtiangang Sub-district, Guanchao Town and Xiacun Town		Office		
11.3	Disbursement to AHs	Initial funds	Resettlement Office	Oct 2017	
12	Commencement of Civil Construction				
12.1	Water Conservancy and Flood Protection Component		PMO	Q3/2017	
12.2	Sewage Drainage Component		PMO	Q2/2019	
12.3	Landscape Planning and Design		PMO	Q3/2017	
12.4	SDSS		PMO	Q2/2019	
12.5	Solid Wastes Environment Project		PMO	Q4/2020	
12.6	Design and Construction of Wetland component		PMO	Q3/2017	
12.7	Sponge City Construction		PMO	Q2/2020	

ADB = Asian Development Bank, HD = house demolition, HH = household, LA = land acquisition, M&E = monitoring and evaluation, RIB = resettlement information booklet, RP = resettlement plan, SDSS = subsurface service delivery system, XCG = Xinyu City Government, PMO = project management office, XCHURDC = Xinyu City Housing and Urban and Rural Development Commission, XURCIG = Xinyu Urban and Rural Construction Investment Group Company, Ltd.
Source: Asian Development Bank estimates.

C. Indigenous Peoples

18. The safeguard category for indigenous peoples is C in accordance with ADB's SPS. Ethnic minorities make up very small percentage of the population in Xinyu City where there are 0.34% minority people. The poverty and social assessment and consultations have confirmed that there are no communities of ethnic minorities in the project area that would trigger ADB's Indigenous Peoples policy.

VIII. GENDER AND SOCIAL DIMENSIONS

A. Summary Poverty Reduction and Social Strategy

104. The project area covers 1 sub-district (Yangtiangang Sub-District), 3 townships (Guanchao, Ouli and Xiacun) and 1 district (Yushui) with a total of 35 villages in the project area with 16,302 households consisting of 55,762 persons, who will be benefited by the project. The project will also benefit new residents in the new high speed railway (HSR) subdistrict, estimated to be an additional 57,000 people by 2020 and an additional 130,000 people by 2030.

105. Consultations with the local people and village leaders revealed that the communities located along the Kongmu River and adjacent to the lakes always experienced floods during heavy rains that caused severe damage to agricultural crops and great economic loss. Based on a social survey conducted by the PPTA consultants in April 2016 with a total of 200 sample households, approximately 69% of households rely on agriculture for their livelihoods, with an average land holding size of 1.2 mu (0.08 ha) and an average annual household income of CNY6,646.00. Over 60% of the households' income is derived from non-farm earnings. About 15% of the 200 respondents had an average annual income below CNY2,968, which is the poverty line in Xinyu City. The percentage of households having access to piped water is 25% and the majority (75%) had access to well and spring water in Yushui District. Key problems identified in the project area include flooding, solid waste and wastewater, poor water quality in the river and lakes. About 88% of the 200 surveyed households in the project area have no existing connection to the sewerage system.

B. Gender Action Plan

106. The project has been designed as effective gender mainstreaming (EGM). Women focus group discussions found that environmental improvements are anticipated to have a significant gender impact, with reduced time burdens and costs for healthcare, preparation for floods, and clean-up after floods; and with overall improvement of surroundings. The project will also create women's employment opportunities. A gender action plan (GAP) has been prepared to ensure that women are kept fully informed and consulted throughout the project and gain maximum benefits from the project. Gender specific indicators have also been included in the project's design and monitoring framework. The GAP includes measures to address gender concerns in all project components and capacity development, which include (i) ensuring that there will be sufficient project management support with appropriate awareness of gender issues to effectively oversee the implementation and monitoring of the GAP; (ii) ensuring the effective inclusion of women in all project activities; and (iii) ensuring that the targets set for the employment of women are met.

107. The GAP includes provisions to ensure that staff of the executing and implementing agencies and PMO are fully oriented on the ADB policy on gender and development, gender mainstreaming, and GAP specific indicators and monitoring and reporting at the commencement of project implementation. The staff responsible for GAP will coordinate with concerned agencies such as women's federations, contractors, and community office staff to facilitate the participation of women in project activities. The staff will also ensure (i) gender disaggregated baseline and survey data will be collected, (ii) the GAP is implemented, monitored, and reported to ADB through semi-annual progress reports. Social development specialist engaged for project management support will mentor the staff as necessary, and facilitate achievement of the project's gender and development objectives. The progress on GAP will be reviewed during ADB review missions, including support of ADB's social development specialist as necessary. GAP is included in Table 18 below.

Table 18: Gender Action Plan

Objective/Activity	Target and Monitoring Indicators	Time Frame	Budget & Sources	Responsible Person/ Organization	Key Stakeholders
Output 1: Integrated rural and urban flood management infrastructure constructed					
<p>1.1 Ensure community participation through consultations with the beneficiaries and affected people during the detailed design stage for developing the flood management systems and measures which include increasing (i) flood retention capacity in the upper watershed and (ii) flood control capacity of the Kongmu River.</p> <p>1.2 Ensure local employment during the implementation and operation stages of the project, targeting women in the following:</p> <ul style="list-style-type: none"> (i) Generate jobs in civil works of canals, embankment, reinforcement/improvement of existing lakes, and other civil works. (ii) Generate jobs during the operation stage. (iii) Ensure timely advertisement of job opportunities. (iv) Protection of labor rights and interests of employees, including equal pay to equal work between men and women. 	<ul style="list-style-type: none"> (i) Number of people participated in consultation during the design stage, including at least 40% women participants (2016 baseline: 0; target: 40%) (ii) Jobs generated in unskilled labor during civil works construction of which at least 25% are held by women (2016 baseline: 0; target: 61,293 person-days) (iii) Jobs generated in unskilled labor during project operation stage, of which at least 25% are held by women (2016 baseline: 0; target: 8,433 person-days) (iv) Contractor advertised the job opportunities in the project villages and women are encouraged to apply (2016 baseline: 0; target: 35 villages) (v) Relevant gender-specific clauses on core labor standards are included in the bidding documents of all contracts (2016 baseline: 0; Target: all contracts) (vi) Employment data disaggregated by sex by type of job (2016 baseline: 0; target: semiannually) 	2017–2023	Budget included in the project implementation consulting services	XCG/ XURCIG through the PMO; other government agencies; NGO (that will implement awareness campaign/ training); project implementation consultant (social development and gender specialist); contractors	Local people; LGUs, including village leaders; other stakeholders
Output 2: Solid waste and wastewater management systems improved					
<p>2.1 Ensure community participation through consultations with the beneficiary people.</p> <p>2.2 Ensure local employment in civil works and operation, targeting women through the following activities:</p> <ul style="list-style-type: none"> (i) Generate jobs during the construction and operation of solid waste management (i.e. collection and transportation of solid waste, transfer stations). (ii) Hire local people including women during the construction of wetlands in lakes and Kongmu River; and during maintenance of the amenity space 	<ul style="list-style-type: none"> (i) Number of participants in consultation during the design and operation, including at least 40% women (2016 baseline: 0; target: 40%) (ii) Jobs generated in both skilled and unskilled labor during construction of solid waste management stage and during operation stage, of which at least 30% are held by women (2016 baseline: 0; target: 15,650 person-days during construction; and 2,036 person-days during operation) (iii) Jobs generated in both skilled and unskilled labor during construction and maintenance of wetlands, of which at least 30% are held by 	2017–2023	Budget included in the project implementation consulting services	XCG/ XURCIG through the PMO; other government agencies (e.g. WF, poverty alleviation office); NGO (to implement awareness campaign/ training); project implementation consultant (social	Local people in the affected villages; LGUs (including village leaders); other stakeholders (schools, community volunteers, youth)

<p>along the lakes and Kongmu River.</p> <p>(iii) Provide appropriate public awareness on solid waste management and maintenance of water-related basic amenities (i.e. wetland, green space inside the park).</p> <p>(iv) Protection of labor rights and interests of employees, including equal pay to equal work between men and women.</p> <p>(v) Ensure that the labor force is provided with the required PPE in compliance with the occupational and health safety standards.</p>	<p>women (2016 baseline: 0; target: 11,517 person-days during construction; and 3,803 person-days during operation)</p> <p>(iv) Number of participants attending solid waste management-awareness training, of which 50% are women (2016 baseline: 0 target: 50%)</p> <p>(v) Relevant gender-specific clauses on core labor standards are included in the bidding documents of all contracts (2016 baseline:0; target: all contracts)</p> <p>(vi) All the labor force is provided with the required PPE for their safety (2016 baseline: 0; target: 100%)</p>			and gender specialist); contractors	
Output 3: Flood and environmental risk management capacity enhanced					
<p>3.1 Ensure that women are included as participants in training and capacity building for flood and environmental management, flood warning and forecast system, and water quality monitoring.</p> <p>(i) Consultation on the design and operation of hydrology and hydraulic water modeling, flooding management.</p> <p>(ii) Public awareness or training on flood management, flood warning and forecast system, solid waste management and/or dissemination of project activities.</p> <p>(iii) Mobilization of community groups for community-based flood and environment management.</p> <p>(v) Study tours for flood and environmental management for XCG staff.</p>	<p>(i) Number of participants in public awareness or training on flood forecasting and early warning system, and solid waste management in affected communities, including at least 40% women (2016 baseline: 0; target: 16,000 participants)</p> <p>(ii) Number of community groups mobilized for flood and environment management, including at least 30% women (2016 baseline: 0; target: 10)</p> <p>(iii) Number of participants attending the study tours and training for flood and environment management, at least 30% women (2016 baseline: 0; target: 100)</p>	2017–2023	Budget included in the project implementation consulting services	XCG/ XURCIG through the PMO; project implementation consultant (social and gender specialist); NGO	Concerned government agencies; LGUs; other stakeholders
Project Management					
<p>4.1 Provide gender awareness training, gender mainstreaming, and GAP monitoring for the PMO/IA staff who will be involved in project implementation and operation.</p> <p>4.2 Hiring of one national social development and gender specialist to assist the PMO/IAs implementation and monitoring of the GAP and other social development aspects.</p>	<p>All PMO/IA staff who will be involved during project implementation participated in training on gender mainstreaming, and GAP monitoring, including 30% female staff (2016 baseline: 0; target: 11)</p> <p>National social development and gender specialist is hired to support the PMO on relevant aspects (2016 baseline: 0; target: 1)</p>	2017–2023	Budget included in the project implementation consulting services	XCG/ XURCIG through the PMO; project implementation consultant (social and gender specialist)	Contractors NGO (that will implement awareness campaign/ training); other agencies; project beneficiaries

4.3 Ensure M&E for the GAP, including collection of appropriate gender indicators.	Sex-disaggregated data in performance and monitoring indicators of GAP are included in semiannual progress reports (2016 baseline: 0; target: semiannually)				
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GAP = gender action plan, IA = implementing agency, LGU = local government unit, M&E = monitoring and evaluation, NGO = nongovernment organization, PMO = project management office, PPE = personal protection equipment, WF = women's federation, XCG = Xinyu City Government, XURCIG = Xinyu Urban and Rural Construction Investment Group Company, Ltd.

Source: Asian Development Bank estimates.

C. Social Development Action Plan

108. A social development action plan (SDAP) has been prepared to enhance positive impacts of the project and mitigate negative impacts. It presents the specific activities and indicators to ensure social inclusion and will benefit the local people including women, and low income households living in the project area.

109. The SDAP presents the following specific activities.

a. Community Mobilization and Participation Activities

110. This is essential to ensure that local people including women, and low-income households will have access to the project benefits during implementation and operation stage across project outputs especially in non-structural measures. Jobs will be generated to provide opportunities for the local people including women, affected people and low-income households to work and earn income during project implementation and operation. The contractors will be encouraged to support this. The PMO social and gender staff together with the loan implementation consultants shall conduct community mobilization activities in the project areas before and during project implementation.

b. Conduct Consultations using Community Participation Approach

111. Consultations with the project beneficiaries, affected people, and other stakeholders in the project areas will be conducted prior to project implementation. Participatory strategies will be used (i.e. key-informant interview, focus group discussion, consultation meetings, community assembly meetings, etc.) with the affected population/communities, concerned local government authorities including village leaders, government agencies, and other concerned stakeholders. The purpose of the consultations is inform the concerned stakeholders about the project, impacts and safeguard measures, grievance redress mechanism, and their perception on how they could maximize benefits from the project. The contractors will be encouraged to hire local people including women during civil works and operation; and inform the communities of the job opportunities. Local people will be encouraged to participate in public awareness campaign, training, consultations and decision-making processes.

112. There will be awareness training/campaign for the local people in the project areas on topics relevant to flood management systems and measures with specific topics on flood early warning systems/emergency response; solid waste management, environmental management, and other relevant topics.

c. Capacity Building for Project Implementers and Community Local Residents

113. The loan implementation consultants will assist in conducting training to staff of executing and implementing agencies, PMO and contractors relevant to project management, safeguard policy, gender and development, monitoring and evaluation. The training will provide the participants information about the ADB safeguards and social development policies, importance of gender mainstreaming, specific target indicators included in the SDAP and GAP, etc.

114. An NGO or civil society organization will be engaged by the executing and implementing agencies to conduct necessary studies, detailed planning and implementation of community flood and environmental management activities. Community flood and environmental management teams (CFEMT) will be organized in selected pilot communities in the project areas. Each CFEMT shall consists of at least 3 community residents (including 30% female) and shall perform the

following tasks: (a) work with local residents to develop and implement community environmental management rules to promote changes of public behavior toward the environment; and (b) disseminate to community residents along the Kongmu River flood forecasting and warning process and plans for emergency response to floods. Training for the relevant staff of the executing and implementing agencies, study tours for the concerned staff in relevant agencies, and knowledge dissemination of lessons learned/project's initiatives to other similar watersheds through workshops, seminars, etc. will also be conducted in the project under Output 3. A total of ten villages will be included in the pilot activities and will be selected during the project implementation based on selection criteria including the following: (i) communities that experience most severe flood and environment risks; (ii) communities are willing to participate in the pilot activities; and (ii) communities have existing groups or can form groups to work in the pilot activities.

d. Job Hiring in Civil Works During Project Implementation and Operation

115. The project entails civil works during implementation and operation. About 6,500 jobs with a total of 156,500 person days will be created during the construction stage, of which 125,200 person days will be for unskilled labor including women who shall comprise about at least 25% of the labor force. The project will also provide employment opportunities to both skilled and unskilled labor during the operation and maintenance stage, estimated to achieve about 51,678 person days (17,226 person days for unskilled labor). The social development action plan matrix including activities, target indicators, responsible agencies/ persons responsible, and time frame is in Table 19 below.

Table 19: Social Development Action Plan Matrix

Proposed Actions	Target Indicators	Agencies/ Persons Responsible	Time Frame	Funding Source	Monitoring Tools/ Indicators
1. Community mobilization and participation 1.1 Conduct consultations with the local people in the project areas to engage them in decision making process during the project design and implementation of relevant key project outputs and activities 1.2 Provide capacity building training to local people including women, low income households and other vulnerable persons in the project areas (e.g. skills to prepare for job opportunities in civil works and operation)	(i) Number of people participated in consultation meetings during project design and implementation stage, of which at least 40% are women and 10% are poor people. (baseline: 0; target: 16,000) (ii) Public awareness activities conducted successfully (including 40% female participation and 10% are poor people) in flood control and environmental management, early warning, flood emergency response; solid waste management, and others. (baseline: 0; target: 16,000) (iii) Number of local people (including 40% female participation and 10% are poor people) trained by the contractor for unskilled labor relevant to the project during project construction. (baseline: 0; target: 6,500)	XCG/IA through PMO; loan implementation consultant; contractors; other agencies (e.g. women federation); NGO selected to implement the community flood & environmental management systems	2017–2023	Included in project costs	Semi-annual monitoring report Project completion report Include sex disaggregated data in the reports
2. Generate skilled and unskilled jobs during project implementation and operation stage 2.1 Provide skilled and unskilled jobs (i.e. construction of embankment, flood protection walls, and retention areas, etc.). 2.2 Provide jobs during O&M including capacity building provided to both skilled and unskilled labor in relevant project outputs.	(i) Number of skilled and unskilled jobs during implementation stage (civil works), of which at least 25% are women and 10% are poor. (baseline: 0; target: 6,500 jobs) (ii) Number of jobs during project and operation, at least 30% women and 10% poor. (baseline: 0; target: 50 positions) (iii) Employment data disaggregated by sex and poverty. (baseline: 0; target: semiannually) (iv) Contractors job opportunities' advertised in all project village offices.	XCG/ IA through PMO; loan implementation consultants; contractors; other agencies	2016–2021	Included in project costs	Monitoring form for labor force both skilled and unskilled hired by contractors (sex disaggregated) Semiannual monitoring report Include sex disaggregated data in the reports

Proposed Actions	Target Indicators	Agencies/ Persons Responsible	Time Frame	Funding Source	Monitoring Tools/ Indicators
	(baseline: 0; target: 35 villages)				
3. Core labor standards, occupational health and safety during construction and operation 3.1 Ensure implementation of the core labor standards (i.e. equal pay for equal work, no child labor, occupation and health safety) and ensure that safety guidelines are incorporated in the contracts. 3.2 Conduct training for the contractors and PMO/IA/other agencies on core labor standards and other relevant requirements.	(i) Relevant core labor standards included in the bidding documents. (baseline: 0; target: all contracts) (ii) Number of the participants in training/capacity building in the EA/IAs and contractors/other agencies including 30% women. (baseline: 0; target: all contractors and staff of PMO/IA)	XCG/ IA through PMO social/ gender staff; loan implementation consultant for social/gender; contractor	2016–2021	Included in project costs	Semiannual monitoring report Include sex disaggregated data in the reports
4. Community–based flood and environment management 4.1 Select pilot communities in ten villages 4. 2 Organize community-based groups for flood and environmental management. (i) Conduct awareness campaign/ training to community groups, schools, etc. (ii) Disseminate information on flood control/warning, environment management to local people, community groups, schools, and others.	(i) Number of community groups mobilized for flood and environment management in pilot villages. (baseline: 0; target:10) (ii) Number of participants/ local residents involved in community flood and environmental management systems including solid waste management, including at least 40% women and 10% poor. (baseline:0; target: 16,000)	XCG/IA through PMO; loan implementation consultant; other agencies; NGO; community groups, others.	2017–2023	In the project consulting budget	Semiannual monitoring report Include sex disaggregated data in the reports

Proposed Actions	Target Indicators	Agencies/ Persons Responsible	Time Frame	Funding Source	Monitoring Tools/ Indicators
5. Training/capacity building to staff of EA/IA on community-based flood and environmental management (i) Conduct training on community-based flood forecasting and warning system for staff of relevant agencies. (iii) Study tours, and disseminate project's initiatives on community-based flood and environmental management.	(i) Number of the EA/IA staff who will be involved in training/capacity building, study tours and others, including at least 30% women. (baseline: 0; target: 100)	XCG/IA through PMO; loan implementation consultant; other agencies	2017–2023	In the project consulting budget	Semiannual monitoring report Include sex disaggregated data in the reports
6. Implementation of mitigation plans for social impacts and sharing of benefits (i) Timely implement social mitigation plans including the resettlement plan. (ii) Provide benefits to affected people.	(i) All compensation, resettlement, and livelihoods activities comply with the RP. (baseline: 0; target: 100% compliance) (ii) Physically-displaced households receive two free apartments per family (in addition to compensation for their houses). (baseline: 0; target: 56 families)	XCG/IA through PMO; loan implementation consultant; other relevant agencies	2017–2023	Included in the RP	Semiannual monitoring reports

EA = executing agency, IA = implementing agency, NGO = nongovernment organization, O&M = operation and maintenance, PMO = project management office, RP = resettlement plan, XCG = Xinyu City Government.
 Source: Asian Development Bank estimates.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

A. Project Design and Monitoring Framework

Impact the Project is Aligned with			
Quality of the living environment in Xinyu City improved (Xinyu City Master Plan, 2008–2030) ^a			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources or Reporting Mechanisms	Risks
Outcome Flood and environmental management in the upper Kongmu River watershed improved	By 2025: a. Land in the upper Kongmu River watershed protected from 20-year flood (a flood that statistically has a 5% chance of occurring in any given year) increased to 2,180 ha of built-up area, benefiting 57,500 people (2016 baseline: 0 ha) b. Water quality at the outlets of the Shen and Tianyun rivers to the Kongmu River meets the class III standard ^b (2016 baseline: Class III–IV) c. New public river, lake, and canal greenways created benefiting about 200,000 residents in Xinyu City (2016 baseline: 0)	a. XCG city report, records, annual statistics, and periodic flood disaster surveys b. City environmental protection bureau's monitoring reports c. XCG statistical yearbooks	The influx of migrants into Xinyu City exceeds forecasts and exerts more pressure, such as a heavy pollution load, on the Kongmu River. Floods exceed project design standards.
Outputs 1. Integrated rural and urban flood management infrastructure constructed	By 2023: 1a. Flood retention capacity in the upper Kongmu River watershed increased by 1.3 million ^c m ³ (2016 baseline: 237,000 m ³) 1b. Three villages protected by a 1.2 km levee from 50-year return period of flood (2016 baseline: 0) 1c. A new 9.98 km stormwater collection network constructed (2016 baseline: 0) 1d. 61,290 person-days of employment during construction and 8,433 person-days of employment during operation created, with at least 25% of positions filled by women (2016	1a–d. ADB mission reports, quarterly project progress reports, and project completion report	Prices of commodities and raw materials increase beyond the budget. Approvals of land clearance and compensation are delayed.

Results Chain	Performance Indicators with Targets and Baselines	Data Sources or Reporting Mechanisms	Risks
	baseline: 0)		
2. Solid waste and wastewater management systems improved	<p>2a. A new 9.63 km wastewater collection network constructed, benefiting 57,500 people in the new subdistrict (2016 baseline: 0)</p> <p>2b. A system capable of collecting and transporting 200 t/d of municipal solid waste constructed (2016 baseline: 16)</p> <p>2c. 17,680 person-days of employment in solid waste management and 15,320 person-days of employment in wetland management created during construction and operation, with at least 30% of positions filled by women (2016 baseline: 0)</p>	2a–c. ADB mission reports, quarterly project progress reports, and project completion report	
3. Flood and environmental risk management capacity enhanced	<p>3a. Flood warning systems in 15 villages along the Kongmu River piloted (2016 baseline: 0)</p> <p>3b. A land-use plan and building code for sponge cities developed and enforced (2016 baseline: 0)</p> <p>3c. Community-based flood and environmental risk management applied in 10 villages, involving at least 14,000 community group members, of whom at least 40% are women (2016 baseline: 0)</p> <p>3d. 10 rainfall, 10 water-level gauge, and 15 water quality monitoring stations installed and calibrated in the Kongmu River watershed (2016 baseline: 0)</p> <p>3e. 10 training workshops attended by at least 50 XCG representatives, who shared knowledge on climate change adaptation and environmental management approaches (2016 baseline: 0)</p>	3a–e. ADB mission MOUs, quarterly project progress reports, and project completion reports	

Key Activities with Milestones**1. Integrated rural and urban flood management infrastructure constructed**

- 1.1 Complete detailed engineering design and bidding documents by Q4 2017
- 1.2 Implement the land acquisition and resettlement plan by Q4 2020
- 1.3 Award contracts from Q3 2017 to Q2 2021
- 1.4 Complete civil works, including (i) sponge city pilot schemes to intercept rainwater, (ii) outlets to increase flood storage in six existing lakes, (iii) dredging of polluted beds in six existing lakes, (iv) canals to connect the six lakes, (v) a stormwater drainage network, and (vi) a multifunction levee from Q3 2017 to Q2 2022

2. Solid waste and wastewater management systems improved

- 2.1 Complete detailed engineering design and bidding documents for solid waste management by Q4 2017 and wastewater management by Q4 2018
- 2.2 Implement the land acquisition and resettlement plan by Q4 2018
- 2.3 Award contracts from Q2 2019 to Q2 2021
- 2.4 Complete civil works for sewer pipe installation by Q2 2022
- 2.5 Complete civil works for wetlands in lakes and canals to treat stormwater runoff by Q2 2022
- 2.6 Complete civil works and equipment installation for solid waste management by Q2 2022

3. Flood and environmental risk management capacity enhanced^d

- 3.1 Complete detailed engineering design and bidding documents by Q4 2020
- 3.2 Install hydrological and water quality monitoring stations and data management systems by Q2 2021
- 3.3 Calibrate and install river basin models by Q2 2023
- 3.4 Conduct risk and emergency response mapping by Q2 2023
- 3.5 Formulate building codes and land use regulations in Xinyu City by Q2 2023
- 3.6 Pilot test the flash flood early warning systems in three selected villages by Q4 2018
- 3.7 Mobilize community-based flood and environmental risk management by Q2 2023
- 3.8 Improve the flood forecasting and early warning system in Xinyu City by Q2 2023
- 3.9 Organize 10 training programs on environmental risk management and climate change adaptation by Q4 2022

Project Management Activities

Recruit project management consultants from Q4 2016 to Q4 2018

Recruit an independent agency for external resettlement M&E by Q1 2017

Implement the EMP and submit semiannual environmental monitoring reports to ADB from 2017 to 2023

Monitor and evaluate project impact, outcome, and outputs using the project performance management system; submit quarterly project progress reports from 2017 to 2023

Carry out training programs, policy dialogue, study tours, and awareness-raising campaigns from Q1 2017 to Q2 2023

Submit the project completion report by 2023

Inputs

ADB: \$150.00 million (loan)

Government: \$150.39 million

Assumptions for Partner Financing

Not Applicable

ADB = Asian Development Bank, EMP = environmental management plan, ha = hectare, km = kilometer, M&E = monitoring and evaluation, m³ = cubic meter, MOU = memorandum of understanding, Q = quarter, t/d = ton per day, XCG = Xinyu City Government, Q = quarter.

^a Government of the People's Republic of China, XCG. 2008. *Xinyu City Master Plan, 2008–2030*. Xinyu.

^b According to the GB 3838-2002 environmental quality standards for surface water in the People's Republic of China, water rated as class III is suitable for drinking and swimming, class IV for general industrial and recreational use, and class V for agriculture and landscaping. Class V+ means that the water is unsuitable for any purpose.

^c Sponge city: 332,450 cubic meter (m³); increased capacity of existing lakes due to modified outlets: 608,175 m³; flood retention capacity in canals: 364,900 m³. Dredging removes 569,300 m³ of polluted soil from the lakes, but this does not provide flood storage as it is below the minimum operating water level, although it helps maintain ecological functions.

^d Activities 3.3 to 3.9 will be carried out continuously throughout the project implementation period to improve the quality of interventions.

Source: Asian Development Bank.

B. Monitoring

116. **Project performance monitoring.** The project performance management system (PPMS) indicators, their relevance, and monitoring practicalities will be discussed with the executing and implementing agencies and project beneficiaries during project implementation. Disaggregated baseline data for output and outcome indicators gathered during project processing will be updated and reported through the quarterly progress reports of the PMO and after each ADB review mission. The semiannual reports will provide information necessary to update ADB's project performance reporting systems.³⁵ At the start of project implementation, the implementing agency and PMO, with the project implementation consulting services, will develop integrated PPMS procedures to generate data systematically on the inputs and outputs of the components, as well as the indicators to be used to measure the project's impact and outcome taking into account the components' scope. The PMO will be responsible for monitoring and reporting on project performance. The basis for performance monitoring will be the design and monitoring framework (DMF), which identifies performance targets for the impact, outcomes, and outputs of the project. By collecting data from the sources identified in the DMF, the PMO will be able to report on an annual basis the performance of the project. Specific reporting requirements will be set out in the loan and project agreements between ADB and the Government. The PMO will collect the data, calculate the indicators, analyze the results, and prepare a brief report describing the extent to which the project is generating the intended outputs and outcomes. The relevance and practicability of data collection for indicators will be confirmed with the implementing agency and PMO. Meanwhile, the agreed socioeconomic and environmental indicators to be used will be further enhanced to measure project impacts. The implementing agency and PMO will (i) refine and integrate the PPMS framework at the start of project implementation; (ii) confirm that targets are achievable; (iii) develop recording, monitoring, and reporting arrangements; and (iv) establish systems and procedures no later than six months after project inception.

117. **Compliance monitoring.** The executing and implementing agencies and the project management consultants, will conduct compliance monitoring, and submit reports and information to ADB concerning the use of the loan proceeds, project implementation, the implementing agency's project implementation performance, and compliance of loan and project covenants. These reports will include (i) quarterly progress reports on project implementation; and (ii) a project completion report, which should be submitted not later than three months after the completion of the project. The compliance status of loan and project covenants will be reported and assessed through quarterly progress report. ADB review missions will verify the status of compliance.

118. **Safeguards monitoring:**

a. Environment

119. Three types of project monitoring will be conducted under the EMP: (i) internal monitoring – to be conducted by the implementing agency and the construction supervision companies (CSCs); (ii) external monitoring – of air, water, noise and soil standards – to be conducted by the local EMS; and (iii) compliance monitoring – to be conducted by the LIEC, to ensure the EMP is being implemented. The project monitoring program is in Table EMP-4 of the EMP (Attachment 1). Monitoring shall comply with the PRC standards for environmental monitoring and quality. ADB will oversee project compliance on the basis of the semi-annual environmental monitoring reports provided by the PMO and site visits as required.

³⁵ ADB's project performance reporting system is available at:
<http://www.adb.org/Documents/Slideshows/PPMS/default.asp?p=evaltool>

120. **Environmental acceptance reporting.** Following the PRC Regulation on Project Completion Environmental Audit (MEP, 2001), within three months after the completion of major components, an environmental acceptance report for each shall be prepared by a licensed environmental monitoring institute. The report will be reviewed and approved by the Xinyu City Environmental Protection Bureau and reported to ADB. The environmental acceptance reports of the component completions will indicate the timing, extent, effectiveness of completed mitigation and of maintenance, and the needs for additional mitigation measures and monitoring during operations.

b. Resettlement

121. A detailed plan for both the internal and external monitoring is included in the resettlement plan. PMO will include a summary of internal monitoring in the semi-annual project progress reports submitted to ADB. Furthermore, PMO will employ an external resettlement monitoring institute or firm to monitor and evaluate resettlement progress and results. A baseline survey for a sample of affected persons will be completed before the LAR begins. Semiannual external monitoring reports will be prepared and submitted for ADB's review during resettlement implementation and annually for two years after completion of resettlement. PMO will submit a completion report after completion of LAR

c. Gender and Social Development Action Plans

122. Monitoring of the gender action plan (GAP) and social development action plan (SDAP) will be incorporated into the PPMS. Clear targets and indicators have been established and are included in the GAP, SDAP and in the DMF. A social and gender specialist will be hired by the executing agency to assist the PMO in the implementation and monitoring, and preparation of semi-annual reports for the GAP and SDAP. He or she will also coordinate with the NGO that will be engaged by the executing agency/PMO to implement the community flood and environmental management systems, and ensure that the gender target indicators are achieved.

C. Evaluation

123. ADB, XCG and the XURCIG will undertake a semiannual review mission to evaluate the progress of project implementation. ADB, XCG and the XURCIG will undertake a comprehensive midterm review two years after the start of project implementation to have a detailed evaluation of the scope, implementation arrangements, resettlement, achievement of scheduled targets, and progress on the agenda for policy reform and capacity building measures. Feedback from the PPMS activities will be analyzed. Within three months of physical completion of the project, the PMO will submit a project completion report to ADB.³⁶

D. Reporting

124. The PMO will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system; (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions, (c) updated procurement plan, and (d) updated implementation plan for the next 12 months; and (iii) a project completion report within 6 months of physical completion of the project. To ensure that projects will continue to be both viable and sustainable, project accounts and the executing agency audited financial statement together with the associated auditor's report, should be adequately reviewed.

³⁶ Project completion report format available at <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>

125. The XCG and XURCIG have the following reporting commitments: (i) submission of quarterly progress reports during project implementation; (ii) submission of semiannual reports on the progress of safeguards monitoring, i.e., resettlement activities, environment plan implementation, semiannual progress reports for GAP and SDAP; (iii) submission of project completion report six months after completion of the project; and (iv) submission of audited project accounts and financial statements six months after the end of fiscal year. PPMS data will be incorporated in the quarterly progress reports.

126. The following table summarizes the key reporting requirements during project implementation.

Table 20: Key reporting requirements

Report	Reference	Timing of Reporting
Project performance management system Develop comprehensive project performance management system procedures Reporting of baseline and progress data	Project Agreement, Schedule, paragraphs	No later than 6 months after loan effectiveness Semiannual, included in the project progress reports
Quarterly project progress reports	Project Agreement, Schedule, Article	Quarterly, within one month after the end of each quarter
Audited project accounts and financial statements, auditor's report (including auditor's opinion on the use of the imprest account and statement of expenditures)	Project Agreement, Schedule, Article	Not later than six months after the closure of fiscal year (end of June)
Resettlement monitoring Internal monitoring reports for the executing and implementing agencies Land acquisition and resettlement phase – external monitoring report Post-land acquisition and resettlement phase – external monitoring report Resettlement completion report	Project Agreement, Schedule, paragraphs	Included in the quarterly progress report Semiannual Annual reports for two years after the resettlement activities' completion Within three months after project completion
Other social monitoring Reporting on gender action plan implementation Reporting on social development action plan implementation	Project Agreement, Schedule, paragraphs	Semiannually, included in the project progress reports Semiannually, included in the semiannual project progress reports
Environmental Report Construction phase – environmental management plan monitoring and progress report Operations phase – external monitoring report	Project Agreement, Schedule, paragraphs	Semiannual Annual, until a project completion report is issued
Project Completion Report	Project Agreement, Schedule, Article	Not later than six months after the physical completion of the project

E. Stakeholder Communication Strategy

127. Project information will be communicated through public consultation, information disclosure mechanism in ADB's and government's website, meetings, interviews, focus group discussions,

and community consultation meetings, in accordance with ADB's requirements of information disclosure policy.

128. **Environment.** Meaningful consultation, participation and information disclosure was conducted during project preparation. Information disclosure and public consultation included newspaper disclosure; informal communication with key stakeholders, including residents, local authorities and sector specific institutions and authorities; questionnaire surveys; and wider stakeholder meetings attended by affected people and other concerned stakeholders. A GRM has been defined to prevent and address community concerns, reduce risks, and assist the project in maximizing environmental and social benefits.

129. **Involuntary resettlement.** All of the affected households and towns/townships, leaders and town and township governments will be involved in the project impact and social-economic survey. Through meetings, interviews, focus group discussions, public consultation workshops, and community consultation meetings, local representatives have participated in the planning and concerns have been integrated into the resettlement plans. Before implementation, the PMO, XURCIG will further discuss and consult with the affected persons' representatives the impacts on every town/township and the detailed compensation plan to ensure affected persons' interests are protected and to provide employment opportunities for the affected persons' livelihoods as a result of project implementation. The PMO and XURCIG will disclose the resettlement plan in the offices and to affected people. The resettlement plans will also be posted on the ADB website. Resettlement information booklets were distributed to affected households. This contains information such as the affected project area, proposed land acquisition and relocation implementation progress and procedure, compensation standards for land acquisition, relocation assistance, and livelihood restoration strategy. The XURCIG will establish a project resettlement unit for supervision of implementation, continued public consultation, monitoring of progress, and response to grievances. The grievance redress procedures will be established and explanations have been included in the resettlement information booklets.

130. Public disclosure of all project documents will be undertaken through the XURCIG and on the ADB website including the project data sheet, DMF, IEE, resettlement plans, and the report and recommendation of the President. Disclosure of social and environmental monitoring reports will be undertaken during project implementation.

131. Consultations with communities and other stakeholders have taken place and will continue at different points in the preparation of the detailed design and implementation of the GAP and SDAP within the components, and will be designed not only to inform people about the component or specific activities related to its preparation and implementation, but also to enable people in the community to know about the project and how they could maximize benefits from the project, ask questions, make suggestions, state preferences, and express concerns. Special attention will be paid to the participation of women and other vulnerable groups, such as the poor. Consultations will also be conducted with other stakeholders such as the contractors, project implementers, and labor force including women to inform them about the GAP and provide them the necessary training on social safeguards, gender and core labor standards.

132. A matrix on stakeholder communication, consultation and participation is in Table 21 below.

Table 21: Stakeholder Communication, Consultation and Participation Plan

Stakeholder Group	Objective of their intervention	Type of Participation and Depth	Participation methods		Time line		Budget
	Why they are included		Method	Who will be responsible	Start date	End date	
EA/IA/PMO: -Xinyu City Government (XCG) -Xinyu Water Resources Bureau (XCWRB) -Xinyu City Administration Bureau (XCAB) -Other relevant agencies/ organizations (including the contractors and NGO)	Key officers and staff directly responsible for the implementation and monitoring of the project. <ul style="list-style-type: none"> To be informed about the project, outputs/components and activities, implementation arrangements/ schedule, budget, and specific functions of agencies in project implementation and monitoring. To increase the EA/IA/PMO's level of knowledge of the ADB safeguard policy statement, policy on gender and development (including gender mainstreaming and GAP implementation and monitoring). To be informed on other relevant policies such as procurement, preparation of progress monitoring reports to be submitted to ADB, and other relevant policies. 	-Information sharing, regular meetings; -Consultation; -Training-workshop, -Shared decision making, and responsibility Participation (high)	Meeting Training-workshop	XCG/ IA through the PMO (social and gender staff) in coordination with other PMO/IA staff. Assisted by the PMO hired consultant for social and gender specialist, and other consultants	2017	2023	Budget for hiring 1 national social, gender consultant included in the project budget
Agencies/ Bureaus/ responsible for implementing specific project outputs/ components and activities (including the safeguard plans, GAP, and SDAP)	Representatives of government bodies in Xinyu City/ Municipal Government, District, Townships and Village leaders responsible for decision-making and will assist during project implementation. <ul style="list-style-type: none"> To define the roles of each agency during project implementation and elicit their support during project implementation and operation. To harmonize the projects with the existing programs/plans of the government agencies/bureaus. To enable the concerned agencies/IA to express their needs/concerns and/or clarify matters to ensure that the project outputs/ components are implemented in a timely manner and in accordance with the ADB approved plans. 	-Regular meetings; -Consultation and shared decision making/ responsibility; -Training/workshop Participation (high)	Meeting Workshop Public consultation	-XCG/IA through the PMO social staff; -Loan implementation consultants (LIC) social and gender specialist -Other consultants	2017	2023	Budget included under the project's training costs

Stakeholder Group	Objective of their intervention	Type of Participation and Depth	Participation methods		Time line		Budget
	Why they are included		Method	Who will be responsible	Start date	End date	
Contractors for civil works, etc.	<p>The contractors need to be informed about the ADB safeguard policy statement (focused on environment, and resettlement); gender and development, core labor standards, etc.</p> <ul style="list-style-type: none"> To be informed about the ADB policy on social safeguards and core labor standards (i.e. providing equal opportunities for men and women in hiring, wages for the same type of jobs, no child labor, occupational safety, etc.). To explain ADB policy on gender and development, gender mainstreaming, and gender-specific indicators as stated in the GAP; and GAP monitoring/preparation of reports. To encourage the contractors to hire local people including women, low-income households and other vulnerable persons in civil works and operation. 	<p>-Information sharing</p> <p>-Consultation</p> <p>-Training/ workshop</p>	<p>Meeting,</p> <p>FGDs</p>	<p>XCG/IA through the PMO social safeguards staff;</p> <p>-LIC social and gender specialist</p>	2017	2023	Budget included in the civil works contracts
APs and AHs (affected by LAR)	<p>Affected persons/ households are interested to know the compensation package/ entitlement and other assistance that will be provided in case their land/houses and other assets will be affected by the proposed project. They need to be informed, engaged them in decision-making process.</p> <ul style="list-style-type: none"> To provide information to APs/ AHs when the project will start, and the extent of land area/ assets affected by the project (as part of project information disclosure). To explain to the APs/ AHs entitlement/ compensation as part of the consultation and decision making process prior to start of project implementation. To assist the APs/ AHs how they could better utilize the compensation to ensure a sustainable investment of compensation received. 	<p>-Information generation/ sharing;</p> <p>-Consultation and shared decision making/ responsibility</p> <p>Participation (high)</p>	<p>Meeting</p> <p>FGD</p> <p>Public consultation</p>	<p>-XCG/IA through the PMO social safeguards staff;</p> <p>-LIC social and gender specialist</p> <p>-Other agencies involved in LAR (including local govt. units).</p>	2017	2023	Budget included in the project (refer to RP)

Stakeholder Group	Objective of their intervention	Type of Participation and Depth	Participation methods		Time line		Budget
	Why they are included		Method	Who will be responsible	Start date	End date	
	<ul style="list-style-type: none"> To inform how they will be benefited by the project. To inform the APs/ AHs of the grievance redress mechanism (GRM) and implementation arrangements. 						
Project beneficiaries (local people) and other stakeholders in the project area	<p>Local people/ beneficiaries/households are interested to know about the project, project implementation, project impacts, GRM process, and how they could access project benefits (i.e. jobs for local people including women, public awareness campaign, training, and other activities) during the design, implementation and operation.</p> <ul style="list-style-type: none"> To inform the local people/ beneficiaries and other stakeholders about the project, implementation arrangements, etc. To be informed of the potential / unintended negative impacts that may arise during project implementation (i.e., land acquisition/ resettlement, temporary or permanent loss of income, etc.) and mitigation measures. To disseminate information about the project, GRM process, etc. To explain the positive impacts or potential benefits that the local people could have during project implementation and operation (i.e. job opportunities, training, etc.). To inform the community residents including the APs/AHs on job opportunities, training, awareness campaign activities, consultation meetings that will be implemented during the design, implementation, and operation/maintenance stages. 	<p>-Information generation/ sharing;</p> <p>-Consultation and shared decision making/ responsibility</p> <p>Participation (high)</p>	<p>-Public consultation (community assembly meetings);</p> <p>-FGDs</p>	<p>-XCG/IA through the PMO social safeguards staff;</p> <p>-LIC social and gender specialist</p> <p>-Village leaders</p>	2016	2023	Budget included in the project (under public awareness/ training)
Other stakeholders in the project areas (farmers, youth, schools, other agencies/	Some local people, representatives of schools (students and teachers), youth, women, farmers and other groups) may be interested to be trained as community volunteers for flood management/ emergency response, solid waste	<p>-Information sharing,</p> <p>-Consultation, and shared decision making, and</p>	Meeting FGD Public consultation	-XCG/IA through the PMO social safeguards staff;	2017	2023	Budget included in the project (under public

Stakeholder Group	Objective of their intervention	Type of Participation and Depth	Participation methods		Time line		Budget
	Why they are included		Method	Who will be responsible	Start date	End date	
organizations, etc.	and environmental management. <ul style="list-style-type: none"> To be informed about the project, outputs/components and activities. To provide information and required basic knowledge and skills for community volunteers for flood control/management, solid waste and environmental management. 	shared responsibility, and control Participation (high)		-LIC social and gender specialist -Village leaders			awareness/ training)
Women	To support gender mainstreaming and ensure that the women could get maximum benefits in the project. <ul style="list-style-type: none"> To be informed about the project, outputs/components and activities. To ensure inclusiveness of women and that they are able to benefit from the project by participating in consultations; job opportunities, awareness campaign and training, and other activities. 	-Information sharing; -Consultation, and shared decision making Participation (high)	Meeting FGD Workshop Public consultation	XCG/IA through the PMO social safeguards staff; -LIC social and gender specialist -Village leaders	2017	2023	Budget included in the project (under public awareness/ training)

ADB = Asian Development Bank, AP = affected person, AH = affected household, EA = executing agency, FGD = focused group discussion, GAP = gender action plan, IA = implementing agency, LAR = land acquisition and resettlement, NGO = nongovernment organization, PMO = project management office, RP = resettlement plan, SDAP = social development action plan.

Source: Asian Development Bank estimates.

X. ANTICORRUPTION POLICY

133. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.³⁷ All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all project contractors, suppliers, consultants, and other service providers. Individuals and/or entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the project.³⁸

134. To support these efforts, relevant provisions are included in the loan and the bidding documents for the project.

XI. ACCOUNTABILITY MECHANISM

135. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make an effort in good faith to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.³⁹

XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL

136. All revisions and/or updates during the course of implementation should be retained in this section to provide a chronological history of changes to implemented arrangements recorded in this project administration manual.

³⁷ Anticorruption Policy: <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>

³⁸ ADB's Integrity Office web site: <http://www.adb.org/integrity/unit.asp>

³⁹ Accountability Mechanism: <http://www.adb.org/Accountability-Mechanism/default.asp>.

INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES FOR PACKAGE CS1: PROJECT MANAGEMENT SUPPORT

A. Introduction

1. This document sets out indicative terms of reference for consulting services needed to ensure the smooth implementation of the Jaingxi Xinyu Kongmu River Watershed Flood Control and Environmental Improvement Project. The direct client of the consulting services is the project management office (PMO) established in Xinyu Urban and Rural Construction Investment Group Company, Ltd. (XURCIG, implementing agency of the project) owned by the Xinyu city government (XCG, executing agency of the project) by 100%.

B. Implementation Arrangements

2. The consulting services for project management support will be carried out by a team of consultants through a firm. A total of 99.0 person-months of national consulting services will be required. The consulting services will be financed by Asian Development Bank (ADB) and the consultants will be recruited by the XURCIG according to ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). 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 80:20. The consulting services are expected to start in 1 July 2017 and finish on loan closing date.

C. Reporting Requirements

3. The consultant team will produce (i) an inception report within 4 weeks of the start of the consulting services, (ii) an annual report by the end of each year during 2017–2022, (iii) draft project completion report (PCR) 2 months before the loan closing date, and (iii) a final PCR by loan closing date. The inception, annual, and draft final reports will be subject to tripartite reviews by ADB, the PMO, and the consultants. All reports are to be written in English and translated into Chinese. One soft and three scanned copies of each report are to be submitted to ADB (English version only) and the PMO (both Chinese and English versions).

4. The inception report will present an approach for the consulting services, including a work plan and an implementation schedule. The annual reports will present activities conducted by the consultants, effects of the consulting services, issues encountered, and recommendations to improve project management. The draft and final PCRs will include summary and evaluation of project implementation; environmental management; land acquisition and resettlement; implementation of the social development action plan (SDAP), gender action plan (GAP), and consultation and participation plan (CPP); compliance to the loan and project covenants; and achievements of the project impact, outcome, and outputs; as well as lesson learned from the project implementation and follow-up actions recommended.

D. Other Requirements

5. The consultant team will provide a fully qualified interpreter to work with the consultants on a full-time basis and support the ADB missions.

E. Scope of Services and Consultants' Inputs

6. For each of the national consultant positions, relevant experiences in development projects in the PRC and good communication skills in English are prerequisites. The specialists

will be based in PMO.

1. Project Management Specialist/Team Leader (national, 22.0 person-months)

7. The specialist will have a postgraduate degree in water resources management or related field with minimum 18 years of experience in profession. He/she should have 12 years of experience in similar positions and in similar assignments preferably with ADB involving project/contract administration involving planning, project implementation, reporting, and capacity building of client's staff. Thorough understanding of technical aspects of flood control, environmental management and flood and environmental risk management as well as a broad understanding of economic, financial, social, environmental and social aspects of the projects is required.

8. The specialist will (i) coordinate all project management support activities as team leader; (ii) finalize approaches for project management support; (iii) prepare the inception report, interim reports, annual reports, draft PCR, and final PCR; (iv) assist the PMO in implementing, monitoring, and evaluating the overall project and subprojects; (v) assist the PMO in preparing quarterly project progress reports in a format provided by ADB; (vi) assess needs for capacity development for staff of the PMO and others, and plan, design, organize, and implement seminars, workshops, and/or training (for project management; financial management; disbursement arrangements, implementation, monitoring; and evaluation of resettlement, gender development, and environmental management, and project monitoring and evaluation [M&E]), if necessary;¹ (vii) monitor compliance with the loan covenants, assess key implementation issues, and make recommendations for improvement; and (viii) conduct any other necessary work for smooth and appropriate implementation of the project.

2. Contract Management Specialist (national, 22.0 person-months)

9. The specialist will have a graduate or higher degree, in business administration, economics, engineering, public procurement, public policy, or other related fields. He/she should have minimum 10 years of relevant professional experience in procurement, and contract management mainly with ADB and other multilateral development banks on project management, contract management and capacity building issues. Work experience in infrastructure mainly water and environment projects is an advantage.

10. The specialist will (i) monitor XURCIG's procurement activities under the project and assist the PMO in updating and implementing the procurement plan; (ii) assist the XURCIG in conducting management of contracts for civil works, goods, and consulting services, including, but not limited to, supervision and inspection of activities under contracts; payments to contractors, suppliers, and consultants; preparation of withdrawal applications; improvement of fund flow efficiency by streamlining the preparation of withdrawal applications; and contract variations; (iii) assist the project management specialist/team leader in monitoring compliance with the loan covenants, assess key implementation issues, and make recommendations for improvement, from procurement and contract management viewpoint; (iv) provide the PMO with support for the preparation of procurement and contract management aspects of quarterly progress reports; (v) provide supports to the project management specialist/team leader for assessing needs for capacity development, and planning, designing, organizing, and

¹ Costs for seminars, workshops, and training excluding consulting services (costs for venues, printing, accommodation and transport for participants, etc.) will be funded from ADB loan under the project separately from the contract for the consulting services.

implementing seminars, workshops, training, and/or study tours for procurement and contract management; (vi) provide support to the project management specialist/team leader for preparing the inception report, annual reports, draft PCR, and final PCR; and (vii) conduct any other necessary work for procurement and contract management assigned by the project management specialist/team leader.

3. Environmental Specialist (national, 15.0 person-months)

11. The specialist will have a graduate or higher degree in Environmental Science, Environment Management, Environmental, Engineering, Natural Resource Management, Geography, Biological Science or a closely related field, and at least 10 years of relevant work experience in the PRC. The consultant must have previous experience in conducting environmental assessment and implementing environmental management plans of various development projects preferably financed by ADB. Experience in working with the environment protection bureaus at different levels is an added advantage, but not mandatory.

12. The specialist will (i) assist the PMO, XURCIG, and design institute in updating the initial environmental examination (IEE) report and environmental management plan (EMP) approved by ADB for the project, in an ADB format and based on the detailed designs; and obtain ADB's approval of them;¹ (ii) assist the XCG and XURCIG in constructing, operating, maintaining, and monitoring the project facilities in strict conformity with all applicable laws and regulations, including national and local regulations and standards for environmental protection, health, labor, and occupational safety; and ADB's Safeguard Policy Statement (2009),² and the IEE report and EMP; (iii) assist the PMO in preparing and submitting to ADB semiannual environmental monitoring reports in a format acceptable to ADB during construction and implementation of the project; (iv) monitor compliance with the IEE report and EMP, assess the degree of impacts and key implementation issues, explain key issues to the PMO and XURCIG, and assist them in conducting follow-up actions to address the key issues; (v) provide the PMO with support for the preparation of environmental aspects of quarterly progress reports; (vi) provide supports to the project management specialist/team leader for assessing needs for capacity development, and planning, designing, organizing, and implementing seminars, workshops, training, and/or study tours for environmental management; (vii) provide support to the project management specialist/team leader for preparing the inception report, annual reports, draft PCR, and final PCR; and (viii) undertake any other necessary work assigned by the project management specialist/ team leader.

4. Resettlement Specialist (national 15.0 person-months)

13. The specialist will have a graduate or higher degree in the social sciences, land administration, or equivalent disciplines. He/she should have preferred 10 years of experience in analyzing, designing and monitoring land acquisition, involuntary resettlement and indigenous peoples' issues and safeguards for development projects in the PRC, particularly those funded by the ADB. He/She should have sound knowledge of and practical experience in developing and implementing resettlement frameworks, as well as resettlement plans of the project. Familiarity with ADB's and the government's social safeguards policies and requirements is a must. The specialist will carry out the social safeguards due diligence in accordance with the requirements of the ADB's SPS 2009, and prepare/update the relevant social safeguards plans

14. The specialist will (i) assist the PMO, XURCIG, and design institute in updating the

¹ The EMP is included in the IEE report.

² Available at: <http://www.adb.org/documents/safeguard-policy-statement>

resettlement plan approved by ADB, in an ADB format and based on the detailed designs; disclose it to the affected persons prior to ADB's approval; and obtain ADB's approval of it; as necessary; (ii) assist the XCG and XURCIG in implementing land acquisition and resettlement in accordance with the resettlement plan, (iii) assist the PMO and XURCIG in supervising contractors to ensure compliance with requirements of the resettlement plan, applicable laws and regulations, and ADB's Safeguard Policy Statement; (iv) assist the PMO and XURCIG in supervising the processes of resettlement by collecting and updating basic data, and closely coordinating between the PMO, XURCIG, and an external resettlement monitor; (v) review external M&E reports prepared by the external resettlement monitor and ADB's comments on the reports, monitor compliance with the resettlement plan, assess the degree of impacts and key implementation issues, explain key issues to the PMO and XURCIG, and assist them in conducting follow-up actions to address the key issues; (vi) assist the PMO to monitor compliance with the resettlement plan, assess key implementation issues, formulate remedial measures, and assist them in conducting follow-up actions; (vii) provide the PMO with support for the preparation of resettlement aspects of progress reports; (viii) provide support to the project management specialist/team leader for assessing needs for capacity development, and planning, designing, organizing, and implementing seminars, workshops, training, and/or study tours for implementation and M&E of land acquisition and resettlement; (ix) provide support to the project management specialist/team leader for preparing the inception report, annual reports, draft PCR, and final PCR; and (x) undertake any other necessary work assigned by the project management specialist/team leader.

5. Social Development Specialist (national, 12.0 person-months)

15. The specialist will have a graduate or higher degree in gender or development studies, anthropology, sociology, economics, applied social science or other related fields. He/she requires at least 10 years of relevant professional experience in gender and development, planning and implementation, social development including poverty-related issues across sectors, or related area as well as in project administration. He/she should have experience in application of multilateral development bank's policies and procedures particularly of ADB and in the PRC for gender mainstreaming and social development.

16. The specialist will (i) assist the XCG and XURCIG in implementing the SDAP, GAP and CPP prepared during project preparation; (ii) assist the PMO and XURCIG in supervising contractors to ensure compliance with requirements of the SDAP, GAP, CPP, and applicable laws and regulations; (iii) monitor compliance with the SDAP, GAP, and CPP; assess the degree of impacts and key implementation issues; explain key issues to the PMO and XURCIG; and assist them in conducting follow-up actions to address the key issues; (iv) provide the PMO with support for the preparation of social aspects of progress reports; (v) provide support to the project management specialist/team leader for assessing needs for capacity development, and planning, designing, organizing, and implementing seminars, workshops, training, and/or study tours for implementation and M&E of the SDAP, GAP, and CPP; (vi) provide support to the project management specialist/team leader for preparing the inception report, annual reports, draft PCR, and final PCR; and (vii) undertake any other necessary work assigned by the project management specialist/team leader.

6. Economist (national, 5.0 person-months)

17. The Economist should have a postgraduate in Economics with 10 years of relevant work experience in donor and government funded projects in the PRC. The expert should have professional experience in undertaking economic assessment of flood and environment management as well as river basin water resources development projects.

18. The specialist will (i) review background documents, including the economic analysis of the project undertaken during project preparation; (ii) conduct economic analyses of the overall project and each subproject to determine economic internal rate of return of the overall project and each subproject at the midterm of project implementation (in 2019 or 2020), and at physical completion of the project; (iii) provide support to the project management specialist/team leader for assessing needs for capacity development; and planning, designing, organizing, and implementing seminars, workshops, training, and/or study tours for economic analysis, as necessary; (iv) provide support to the project management specialist/team leader for preparing the inception report, annual reports, draft PCR, and final PCR; and (v) undertake any other necessary work assigned by the project management specialist/team leader.

7. Financial Specialist (national, 8.0 person-months)

19. The specialist should have a postgraduate degree in the field of finance or related fields. Any professional qualifications including in accountancy would be an asset. The candidate must have relevant experience of at least 10 years in the Government sector accounting as well as the accounting and auditing of the donor funded projects in the PRC.

20. The specialist will (i) review background documents; (ii) conduct financial analysis at the midterm of project implementation (in 2019 or 2020), and at physical completion of the project, including (a) financial sustainability analysis to assess the fiscal sustainability debt repayment capacity of the XCG as a whole; and (b) an assessment of the financial viability of the revenue-generating components, i.e., the wastewater collection system; (iii) assist the XURCIG and PMO in establishing and implementing a financial management system; (iv) assist the XURCIG and PMO in preparing withdrawal applications and streamlining the preparation of withdrawal applications; (v) conduct or provide any necessary assessments, review, or assistances related to wastewater tariff so that all assurances for wastewater tariff required in the project agreements are fulfilled; (vi) provide support to the project management specialist/team leader for assessing needs for capacity development; and planning, designing, organizing, and implementing seminars, workshops, training, and/or study tours for financial analysis, as necessary; (vii) provide support to the project management specialist/team leader for preparing the inception report, annual reports, draft PCR, and final PCR; (viii) train XCFB/XURCIG staff on ADB disbursement procedures and requirements; (ix) train XCFB/XURCIG staff on ADB financial management requirements, specifically accounting, reporting and auditing; and (x) undertake any other necessary work assigned by the project management specialist/team leader.

F. Cost Estimate

Table A1.1: Cost Estimate

Item	Total Cost (\$'000)
1. Consultants	
a. Remuneration and per diem	
National consultants (99.0 person-months)	869.5
b. Local travel	52.5
c. Reports and communications	4.0
2. Workshops, training, seminars, and conferences (training program)	10.0
3. Surveys	10.0
4. Miscellaneous administration and support costs	4.0
5. Contingencies	50.0
Total	1,000.0

Source: Asian Development Bank estimates.

INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES FOR PACKAGE CS2: EXTERNAL MONITORING AND EVALUATION OF LAND ACQUISITION AND RESETTLEMENT

A. Introduction

1. This document sets out the indicative terms of reference for independent external monitoring and evaluation (M&E) of land acquisition and resettlement (LAR) needed to ensure that the Jiangxi Xinyu Kongmu River Watershed Flood Control and Environmental Improvement Project is implemented in conformity with the People's Republic of China (PRC) laws and regulations and the Asian Development Bank's (ADB's) Safeguard Policy Statement (2009), including involuntary resettlement. The direct client of the consulting services is the project management office (PMO) established in Xinyu Urban and Rural Construction Investment Group Company, Ltd. (XURCIG, implementing agency of the project) owned by the Xinyu city government (executing agency of the project) by 100%.

B. Implementation Arrangements

2. The external resettlement M&E will be carried out by a team of specialists through a competent independent external monitoring agency (EMA). The M&E will be financed by ADB, and the team of specialists will be recruited by the PMO according to ADB's Guidelines on the Use of Consultants (2013, as amended from time to time) through consultants' qualifications selection. The PMO and XURCIG will provide assistance to the EMA, particularly in the aspects of field survey, staffing, and logistics.

D. Reporting Requirements

3. The EMA will submit to ADB and the PMO semiannual external resettlement M&E reports during the implementation of land acquisition and resettlement (LAR), and annual external resettlement M&E reports for 2 years after the completion of the LAR. Printed reports will be in Chinese (5 copies) and English (3 copies). The EMA will take full responsibility about the contents and quality of the reports; and if necessary, must revise reports upon the comments of ADB and the PMO. Format of the reports will be proposed by the EMA in the technical proposal. The EMA may seek guidance from ADB's Involuntary Resettlement Sourcebook and from examples of reports on ADB website.

E. Scope of Services and Consultants' Inputs

4. According to ADB's requirements, the implementation of the resettlement plan should—besides internal monitoring undertaken by the PMO and XURCIG—be monitored by the EMA. The EMA to be selected will monitor the implementation of the resettlement plan; and report progress semiannually during the implementation of LAR, and annually for two years after the completion of the LAR. External resettlement M&E reports will be submitted to ADB and the PMO for review and follow-up action, if required.

5. The general objective of the external resettlement M&E is to assess the compliance with principles, policies, and requirements mentioned in the resettlement plan, including (i) to determine and assess whether or not the compensation payment, support, and resettlement for the affected persons as well as the process of community consultation, information disclosure, and resolution of complaints and grievances are being carried out in compliance with principles, requirements, and procedures according to the resettlement plan; (ii) to review whether or not

the resettlement plan's objectives, especially those that improve or at least restore affected persons' living standards are adequately implemented and achieved; and (iii) to review shortcomings in the implementation of the resettlement plan, and develop recommended solutions for discussion with the XURCIG.

6. To carry out the M&E, the EMA will address the following tasks.

- (i) **Periodic M&E.** During the implementation of LAR, the EMA will periodically monitor and evaluate the implementation of the resettlement plan according to the progress of each subproject mobilized by the PMO (fundamentally semiannually for each subproject).
- (ii) **Post resettlement M&E.** For two years after the completion of the implementation of the resettlement plan for the whole project, the EMA will carry out post resettlement M&E to evaluate the results of the LAR implementation and impact of the LAR on the affected persons (fundamentally annually for each subproject).
- (iii) Participate with the PMO in ADB's review missions, as required.

7. **Monitoring indicators.** There are various monitoring indicators on the implementation of the resettlement plan. Once selected, the EMA will have to present in detail the monitoring indicators to the PMO and ADB for approval. Below are main monitoring indicators that need to be focused during the monitoring.

- (i) For compliance of compensation payment and support provision
 - (a) In case of land-for-land compensation, whether the replaced land is equal in area and location as well as production, living conditions in comparing with the affected land; in case of cash-for-affected land, whether the replacement cost principle is ensured.
 - (b) Whether compensation for affected structures is equal to materials and labor replacement cost according to standards and specification of the work; whether reused materials are not deducted or discounted; and whether assets are depreciated based on age.
 - (c) Whether compensation for trees and/or crops takes into account market rates.
 - (d) Whether compensation is fully paid to affected persons; either through single installment or multiple installments.
 - (e) Whether other assistance as specified in the resettlement plan is provided to affected persons, as required.
- (ii) For compliance of information disclosure and community consultation
 - (a) Whether project documents (resettlement information booklet and relevant documents) are disseminated to communities.
 - (b) Whether information (results of detailed measurement survey, prices application, disbursement of payment) is promulgated at public places, and whether the process was effective.
 - (c) Whether the affected persons are fully consulted about issues of land recovery, policies on compensation, resettlement, livelihood restoration, and access to a grievance redress mechanism.

- (d) Whether the concerns and recommendations of the affected persons are resolved during the implementation of the resettlement plan; as well as the manner by which they have been addressed.
- (iii) For relocation plan and implementation
 - (a) Resettlement methods, participation in relocation planning, announcement of relocation plan, and support to relocated households.
- (iv) For compliance of LAR implementation for the relocated affected persons
 - (a) Housing and living conditions in resettlement sites (such as road, domestic power, water distribution and/or drainage system); and restoration of community, education, and health services.
 - (b) Whether replacement housing was provided in a complete and timely manner.
 - (c) Any issues related to transitional housing and/or period.
 - (d) Whether the new location has had any impact on the affected persons' livelihoods.
- (v) For compliance of income restoration and support to livelihood stabilization
 - (a) Whether support to income restoration is adequately provided, and efficiency of the income restoration support (e.g., training, credit assistance).
 - (b) Post resettlement life and production stabilization. How affected persons stabilize their life and production.
 - (c) Problems that affected persons are facing during the income restoration and life stabilization.
 - (d) Compensation and restoration of temporary land occupation.
- (vi) For compliance of the satisfaction of the affected persons
 - (a) Satisfaction of the determination of losses and compensation valuation.
 - (b) Satisfaction of compensation payment and other assistance.
 - (c) Satisfaction of information disclosure, consultation.
 - (d) Satisfaction on life stabilization and income restoration support activities.
 - (e) Satisfaction of resettlement site, relocation site, completeness of facilities.
- (vii) For compliance of grievance redress mechanism of the affected persons
 - (a) Degree of the efficiency of the grievance redress mechanism (time, efficiency of resolution).
 - (b) Results of complaint resolution at various levels.
 - (c) Satisfaction of the grievance redress mechanism.

8. **Methodology of M&E.** The EMA will apply both qualitative and quantitative methods during monitoring, including the following.

- (i) Quantitative methods
 - (a) Conduct baseline survey (prior to start of LAR) covering a representative sample of affected persons, focusing more on those seriously affected and vulnerable affected persons.
 - (b) Conduct semiannual and annual questionnaire survey during project implementation for 50% of severely affected households and 20% of all other affected households.

- (c) Use the existing statistical data at local levels, and data from district and/or county resettlement bureaus.
 - (d) Survey affected businesses and workers.
 - (e) Conduct final M&E of LAR implementation (prior to project completion) by conducting a sample survey on 50% of severely affected households and 20% of all other affected households.
- (ii) Qualitative methods
 - (a) Review project documents (feasibility study reports, resettlement plan), ADB relevant policies, laws and regulations of the PRC, Jiangxi Province, and Xinyu City.
 - (b) Consult and discuss with different stakeholders, including XURCIG and social organizations through consultation meetings, in-depth interviews, and group discussions.
 - (c) Undertake focus group discussions, in-depth interviews with the target affected persons; and/or groups such as severely affected households, relocated households, vulnerable households, and women's groups.
- (iii) Site visits
 - (a) Conduct site visits to original housing areas and resettlement sites, as well as project construction sites to check whether resettlement sites are constructed with complete infrastructure and identify potential impacts on local people during civil works construction.

9. All information and data collected will be processed, analyzed, and included in the baseline or subsequent M&E reports. The EMA must store the processed data to serve for the next M&E. These data will belong to (and will be the asset of) the PMO and will be made available to ADB or the PMO upon request. All documentation will be transferred to the PMO at the completion of the contract.

10. **M&E frequency.** Frequency of the two types of M&E are as follows.

- (i) **For periodic M&E.** Periodic M&E will be carried out in project sites at least twice a year or at suitable schedules determined by the PMO to collect information and apply the above-mentioned monitoring indicators. The periodic M&E report will be submitted not later than 30 days after the completion of field investigations; and
- (ii) **For post-resettlement M&E.** Post-resettlement M&E will be carried out for two years after the completion of LAR activities, at least once a year or at suitable scheduled determined by the PMO, to evaluate the efficiency of the LAR. The post resettlement M&E report will be submitted to ADB and the PMO not later than 30 days after the completion of the field investigations.

11. **Qualification required and detailed tasks of personnel.** The EMA should be a registered social organization (research institution, design institute, consulting institution and/or firm, university, or nongovernment organizations) without direct administrative subordination relations with the Xinyu city government and XURCIG. The EMA should have 5 or more qualified technical staff members. Professional staff members of the EMA should have degrees in economics, sociology and/or anthropology, or a relevant field of social sciences; are familiar with ADB's or World Bank's resettlement policies and procedures; have previous experience in

MOE of LAR for projects funded by ADB or World Bank. The EMA should also have experience in undertaking similar projects in the PRC.

12. The EMA will establish a M&E team. The main duties of the team are to (i) carry out the M&E on the implementation of the resettlement plan to ensure it is in compliance with the resettlement plan; (ii) advise XURCIG and PMO on the implementation of the resettlement plan to ensure policies and procedures are complied with; and (iii) provide information and data, monitoring results, and observations that the team leader will aggregate into the external M&E reports.

13. All team members must be fluent in Chinese, but reports submitted to ADB will be in English. For each of the members, (i) possession of a related degree, qualification, and/or memberships of related academic societies; and/or past participation in related training courses; (ii) experience in similar positions for projects; and (iii) experience in working with international organizations and/or international consultants will be highly evaluated.

1. Resettlement Specialist and Team Leader (national, 10.0 person-months)

14. The specialist will conduct, but not limited to, the following tasks: (i) lead all the activities of the team; (ii) lead and set up the monitoring methodology, including design of baseline and tracer surveys; (iii) work and coordinate with relevant agencies and/or bodies within the project to implement the task of M&E activities; (iv) lead and conduct the M&E activities and required surveys to collect data and information at office and project sites, and then analyze the findings; (v) prepare external resettlement M&E reports which include conclusions and recommendations; (vi) discuss findings with the PMO and XURCIG to reach agreement on follow-up actions; and (vii) participate in ADB review missions.

2. Social Evaluation Specialist (national, 10.0 person-months)

15. The specialist will conduct, but not limited to, the following tasks: (i) monitor the LAR activities mentioned in the resettlement plan to ensure LAR is being carried out in compliance with principles, requirements, and procedures according to the resettlement plan and the governments' laws and/or regulations; and monitor the compensation payments and livelihood restoration of the affected persons; (ii) provide inputs to the external resettlement M&E reports, which would include progress, challenges and/or bottlenecks during implementation; and propose solutions and/or recommendations to address these issues; (iii) participate in ADB review missions, if required; and (iv) conduct any other duties assigned by the resettlement specialist/team leader.

3. Field Surveyors (national, two positions, 5.0 person-months each)

16. The surveyors will (i) assist the resettlement and social evaluation specialists in carrying out the monitoring on the implementation of the resettlement plan so that the LAR implementation is in compliance with the resettlement plan; (ii) under the guidance of the resettlement and social evaluation specialists, carry out field surveys; (iii) analyze the data collected from the field surveys; (iv) provide assistance to the resettlement and social evaluation specialists for the preparation of the external resettlement M&E reports; and (v) conduct any other duties assigned by the resettlement specialist/team leader.

F. Cost Estimate**Table A2.1: Cost Estimate**

Item	Total Cost (\$'000)
1. Consultants	
a. Remuneration and per diem	
National consultants (30.0 person-months)	174.0
b. Local travel	4.0
c. Reports and communications	3.0
2. Surveys	3.0
3. Miscellaneous administration and support costs	3.0
4. Contingencies	3.0
Total	190.0

Source: Asian Development Bank estimates.

**INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES
FOR
PACKAGE CS3-a: PROJECT IMPLEMENTATION STARTUP SUPPORT (PROJECT
MANAGEMENT AND PROCUREMENT)**

A. Introduction

1. This document sets out indicative terms of reference for consulting services needed to ensure the smooth implementation startup of the Jaingxi Xinyu Kongmu River Watershed Flood Control and Environmental Improvement Project. The direct client of the consulting services is the project management office (PMO) established in Xinyu Urban and Rural Construction Investment Group Company, Ltd. (XURCIG, implementing agency of the project) owned by the Xinyu city government (executing agency of the project) by 100%.

B. Implementation Arrangements

2. The consulting services will be carried out by an individual consultant (national project management and procurement specialist). The consulting services will be financed by Asian Development Bank (ADB) and the specialist will be recruited by the XURCIG according to ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The specialist will be selected using the individual consultant recruitment method. The consulting services are expected to start in 1 February 2017 and finish on 31 July 2017.

C. Reporting Requirements

3. By the end of the assignment, the specialist will submit a report on his/her activities to ADB and the PMO (soft and scanned copies of the English version to ADB and the English and Chinese versions to the PMO).

D. Detailed Scope of Services and Consultants' Inputs

4. The start-up support consulting services will include a total input of 4.0 person-months by one individual national project management and procurement specialist. The consultant will have a university degree or above in management, accounting, or related field. He/she shall be proficient in English and have at least 10 years of experience in project management, procurement, and consultant recruitment for projects funded by ADB or other international funding agencies. Knowledge on ADB's Procurement Guidelines (2015, as amended from time

to time), ADB's Guidelines on the Use of Consultants (2013, as amended from time to time), and other ADB's procedures for procurement and consultant recruitment are required.

5. Tasks and responsibilities of the specialist are to, but are not limited to: (i) understand a format of quarterly project progress reports provided by ADB, and provide the PMO with guidance on how to fill-in the format by assisting them in preparing the first report; (ii) improve internal procedures of routine data collection and filling and information exchange among the PMO, XURCIG, and other agencies of the Xinyu city government (Finance Bureau, Water Affairs Bureau, Administration Bureau, etc.) for smooth project implementation and quarterly project progress reporting; (iii) assist the XURCIG and PMO in recruiting a consultant team for project management support (package number CS1), a competent independent external monitoring agency for external monitoring and evaluation of and acquisition and resettlement (package number CS2), and a consultant team for capacity development for flood and environmental management and dissemination of project initiatives (package number CS4); (iv) provide any support to the XURCIG and a procurement agency engaged by the XURCIG for procurement of works and goods, including preparation of bidding documents; (v) develop capacities of the XURCIG and PMO for project management, procurement, and consultant recruitment; and (vi) perform any other tasks for project management, procurement, and consultant recruitment during the start-up phase of the project.

E. Cost Estimate

Table A3.1: Cost Estimate

Item	Total Cost (\$'000)
1. Consultant	
a. Remuneration and per diem National consultant (4.0 person-months)	32.2
b. Local travel	2.0
c. Reports and communications	0.1
2. Miscellaneous administration and support costs	0.5
3. Contingencies	1.2
Total	36.0

Source: Asian Development Bank estimates.

**INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES
FOR
PACKAGE CS3-b: PROJECT IMPLEMENTATION STARTUP SUPPORT (LAND
ACQUISITION AND RESETTLEMENT)**

A. Introduction

1. This document sets out indicative terms of reference for consulting services needed to ensure the smooth implementation startup of the Jaingxi Xinyu Kongmu River Watershed Flood Control and Environmental Improvement Project for land acquisition and resettlement (LAR). The direct client of the consulting services is the project management office (PMO) established in Xinyu Urban and Rural Construction Investment Group Company, Ltd. (XURCIG, implementing agency of the project) owned by the Xinyu city government (executing agency of the project) by 100%.

B. Implementation Arrangements

2. The consulting services will be carried out by an individual consultant (national resettlement specialist). The consulting services will be financed by Asian Development Bank (ADB) and the specialist will be recruited by the XURCIG according to ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The specialist will be selected using the individual consultant recruitment method. The consulting services are expected to start in 1 March 2017 and finish on 31 July 2017.

C. Reporting Requirements

3. By the end of the assignment, the specialist will submit a report on his/her activities to ADB and the PMO (soft and scanned copies of the English version to ADB and the English and Chinese versions to the PMO).

D. Detailed Scope of Services and Consultants' Inputs

4. The start-up support consulting services will include a total input of 3.0 person-months by one individual national resettlement specialist. The specialist will have a university degree or above in resettlement, social, or related field. He/she shall be proficient in English and have at least 10 years of experience in LAR in the People's Republic of China on projects funded by ADB or other international funding agencies. Knowledge on ADB's Safeguard Policy Statement (2009) and ADB's or other international funding agencies' procedures for LAR are required.

5. Tasks and responsibilities of the specialist are to, but are not limited to: (i) assist the PMO, XURCIG, and design institute in updating the resettlement plan approved by ADB, in an ADB format and based on the detailed designs; disclose it to the affected persons prior to ADB's approval; and obtain ADB's approval of it; as necessary; (ii) assist the XURCIG and PMO in ensuring adequate resettlement readiness prior to LAR; (iii) assist the XURCIG and PMO in establishing an effective grievance redress mechanism, including a mechanism to ensure reporting of complaints, follow-up actions, and results; (iv) provide the PMO with support for the preparation of resettlement aspects of the first progress report, as necessary; (v) provide training to the XURCIG and PMO so they understand ADB's policies and compliance requirements for LAR; (vi) assist the XURCIG and PMO in establishing an internal LAR monitoring and reporting system; (vii) assist the XURCIG and PMO in handing over relevant documents and files to the project management support consultant team engaged in package

number CS1 and brief the team, particularly the resettlement specialist in the team, current status and outstanding issues; and (viii) perform any other LAR related tasks during the start-up phase of the project.

E. Cost Estimate

Table A4.1: Cost Estimate

Item	Total Cost (\$'000)
1.	Consultant
a.	Remuneration and per diem
	National consultant (3.0 person-months)
	24.2
b.	Local travel
	1.5
c.	Reports and communications
	0.1
2.	Miscellaneous administration and support costs
	0.5
3.	Contingencies
	0.7
Total	27.0

Source: Asian Development Bank estimates.

**INDICATIVE TERMS OF REFERENCE FOR CONSULTING SERVICES
FOR
PACKAGE CS4: CAPACITY DEVELOPMENT FOR FLOOD AND ENVIRONMENTAL
MANAGEMENT**

A. Introduction

1. This document sets out indicative terms of reference for consulting services to develop capacities for flood and environmental management and to disseminate initiatives the Jaingxi Xinyu Kongmu River Watershed Flood Control and Environmental Improvement Project to other river watersheds. The direct client of the consulting services is the project management office (PMO) established in Xinyu Urban and Rural Construction Investment Group Company, Ltd. (XURCIG, implementing agency of the project), which is a company owned by the Xinyu city government (XCG, executing agency of the project) by 100%.

C. Implementation Arrangements

2. The consulting services for project management support will be carried out by a team of consultants through a firm. A total of 24 person-months of international and 64 national consulting services will be required. The consulting services will be financed by Asian Development Bank (ADB) and the consultants will be recruited by the PMO according to ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The consulting firm will be selected by (i) inviting full technical proposals; and (ii) using the quality- and cost-based selection method, with a quality–cost ratio of 80:20. The consulting services are expected to start on 1 October 2017 and finish on the loan closing date.

D. Reporting Requirements

3. The consultant team will produce (i) an inception report within 4 weeks of the start of the consulting services, (ii) an annual report by the end of each year during 2017–2022, (iii) draft final report 2 months before the loan closing date), and (iii) a final report by 31 December 2023 (loan closing date). The inception, annual, and draft final reports will be subject to tripartite reviews by ADB, the PMO, and the consultants. All reports are to be written in English and translated into Chinese. One soft and three scanned copies of each report are to be submitted to ADB (English version only) and the PMO (both Chinese and English versions).

4. The inception report will present an approach for the consulting services, including a work plan and an implementation schedule. The annual, draft final, and final reports will present activities conducted by the consultants, effects of the consulting services, issues encountered, and recommendations.

E. Other Requirements

5. The consultant team will provide a fully qualified interpreter to work with the consultants on a full-time basis and support the ADB missions.

F. Scope of Services and Consultants' Inputs

Tasks and responsibilities of the consultant team, but are not limited to, are below.

(i) Provide guidance to design institutes for preliminary and/or detailed designing, as

necessary (e.g. for flood forecasting and warning system and constructed wetlands).

- (ii) Prepare a land use plan for the overall new high speed railway (HSR) subdistrict to realize sponge city concept.
- (iii) Develop an outline of building regulations (e.g., for limits on percentage of impervious surfaces; and construction of on-site storm water management measures, such as rainwater tanks, on-site detention basins, and infiltration trenches) to realize sponge city concept in the overall new HSR subdistrict, and assist the XCG (or another responsible agency of the XCG, such as XURCIG) in officially issuing building regulations to be applied to the overall new HSR subdistrict.
- (iv) Supervise the pilot projects for on-site storm water management (introduction of sponge city concept to the new HSR subdistrict) and monitor effects of the installed facilities.
- (v) Study the best approach for and value of flood proofing of buildings, and disseminate the results of the study to residents along Kongmu River.
- (vi) Prepare a plan for emergency responses to floods mainly for residents along Kongmu River.
- (vii) Select NGO(s) or civil society to conduct community flood and environmental management. The NGO(s) organizes a community environmental management team (CEMT) in each of 10 communities where environment, particularly solid waste management, is a serious issue, and a community flood management team (CFMT) in each of 10 villages where residents are vulnerable to floods. Each team consists of three community residents including at least one woman. Each CEMT works with local residents to develop and implement community environmental management rules to promote changes of public behavior toward the environment. Each CFMT disseminates to community residents along Kongmu River flood forecasting and warning process and the plan for emergency responses to floods. Each team member will be paid CNY500 per month, and each team will be granted a public welfare activity fund of CNY5,000 for 2 years. Team members are selected for terms of 2 years and can serve no more than two terms. The implementation arrangement and detailed planning will be confirmed once the communities are selected.
- (viii) Select communities where residents are vulnerable to flash flooding and pilot flash flood warning in those communities, using hydrological data (mainly rainfall data) collected from hydrological monitoring stations in the upstream watershed.
- (ix) Supervise construction of constructed wetlands and greening, and monitor effects of the constructed wetlands.
- (x) Improve the river basin model developed and used during the project preparatory technical assistance so that it can be used by the XCG particularly Xinyu City Water Affairs Bureau for river basin management and planning.
- (xi) Conduct training for relevant XCG staff on (a) flood and storm water control, including operation and maintenance of the facilities (e.g. on-site storm water management facilities and pumps); (b) flood forecasting and warning (including data management); (c) river management and planning using the river basin model; (d) solid waste collection

and transfer; (e) maintenance and monitoring of the constructed wetlands; etc.

- (xii) Plan and prepare overseas and domestic study tours for flood and environmental management.
- (xiii) Disseminate project's initiatives (innovative on-site storm water management, river basin model, flood and environmental management planning combined with urban planning, etc.) to other similar river watersheds, through (a) workshops inviting other cities; (b) training, not only for XCG staff but also for other city staff; (c) publications including knowledge products; (d) disclosure of project information on website; (e) submission of papers to academic societies; (f) application for model sponge city; (g) application for award programs; etc.

6. Each consultant's input is shown in Table A5.1. For each of the international consultant positions, (i) possession of a related degree, qualification, and/or memberships of related academic societies; and/or past participation in related training courses; (ii) experience in similar positions for projects or technical assistances; and (iii) experience in projects in the People's Republic of China will be highly evaluated. For each of the national consultant positions, (i) possession of a related degree, qualification, memberships of related academic societies, and/or participation in related training courses, (ii) experience in similar positions for projects or technical assistances, and (iii) experience in working with international organizations and consultants, will be highly evaluated.

Table A5.1: Consultants' Inputs

Activities	Consultants Inputs (person-months)												
	Flood risk management		Storm water management		Land use planning		Hydraulic modeling		Environment	Architect	Wetland and vegetation	Solid waste management	Community development
	Int	Na	Int	Na	Int	Na	Int	Na	Na	Na	Na	Na	Na
(i) Preliminary and/or detailed designing		1.0									1.0		
(ii) Land use plan for new HSR subdistrict			0.5	1.0	1.5	3.0			1.0				
(iii) Building regulations for new HSR subdistrict			0.5	1.0					0.5	1.0			
(iv) Pilot projects for on-site storm water management			1.0	1.0					1.0		1.0		
(v) Flood proofing of buildings	1.0	1.5								1.0			
(vi) Emergency responses to floods	1.0	1.5											
(vii) CEMTs and CFMTs		2.0							0.5			2.0	10.0
(viii) Pilot flash flood warning	1.5	2.0											
(ix) Supervision and monitoring of wetlands construction and greening											2.0		
(x) Improvement of the river basin model							3.0	5.0					
(xi) Training for relevant XCG staff	1.0	2.0	1.0	2.0			1.0	2.0	1.0		1.0	2.0	
(xii) Planning and preparation of overseas and domestic study tours	1.0	1.0	1.0	1.0			1.0	1.0	1.0		1.0	1.0	
(xiii) Disseminate project's initiatives	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.0	1.0	1.0	1.0	
(xiv) Tasks as TL	2.0												
Total	9.0	11.5	5.5	7.5	3.0	4.5	6.5	9.5	6.0	3.0	6.0	6.0	10.0

CEMT = community environmental management team, CFMT = community flood management team, Int = international, Na = national, TL = team leader, XCG = Xinyu city government.

F. Cost Estimates**Table A5.2: Cost Estimate**

Item	Total Cost (\$'000)
1.	Consultants
a.	Remuneration and per diem
	International consultants (24.0 person-months) 563.9
	National consultants (64.0 person-months) 555.5
b.	International and local travel 86.2
c.	Reports and communications 10.0
2.	Equipment 5.0
3.	Workshops, training, seminars, and conferences (training program) 15.0
4.	Surveys 20.0
5.	Miscellaneous administration and support costs 10.0
6.	Payments to NGOs, CEMTs, and CFMTs 250.0
7.	Contingencies 84.4
Total	1,600.0

CEMT = community environmental management team, CFMT = community flood management team, NGO = non-governmental organization.

Source: Asian Development Bank estimates.